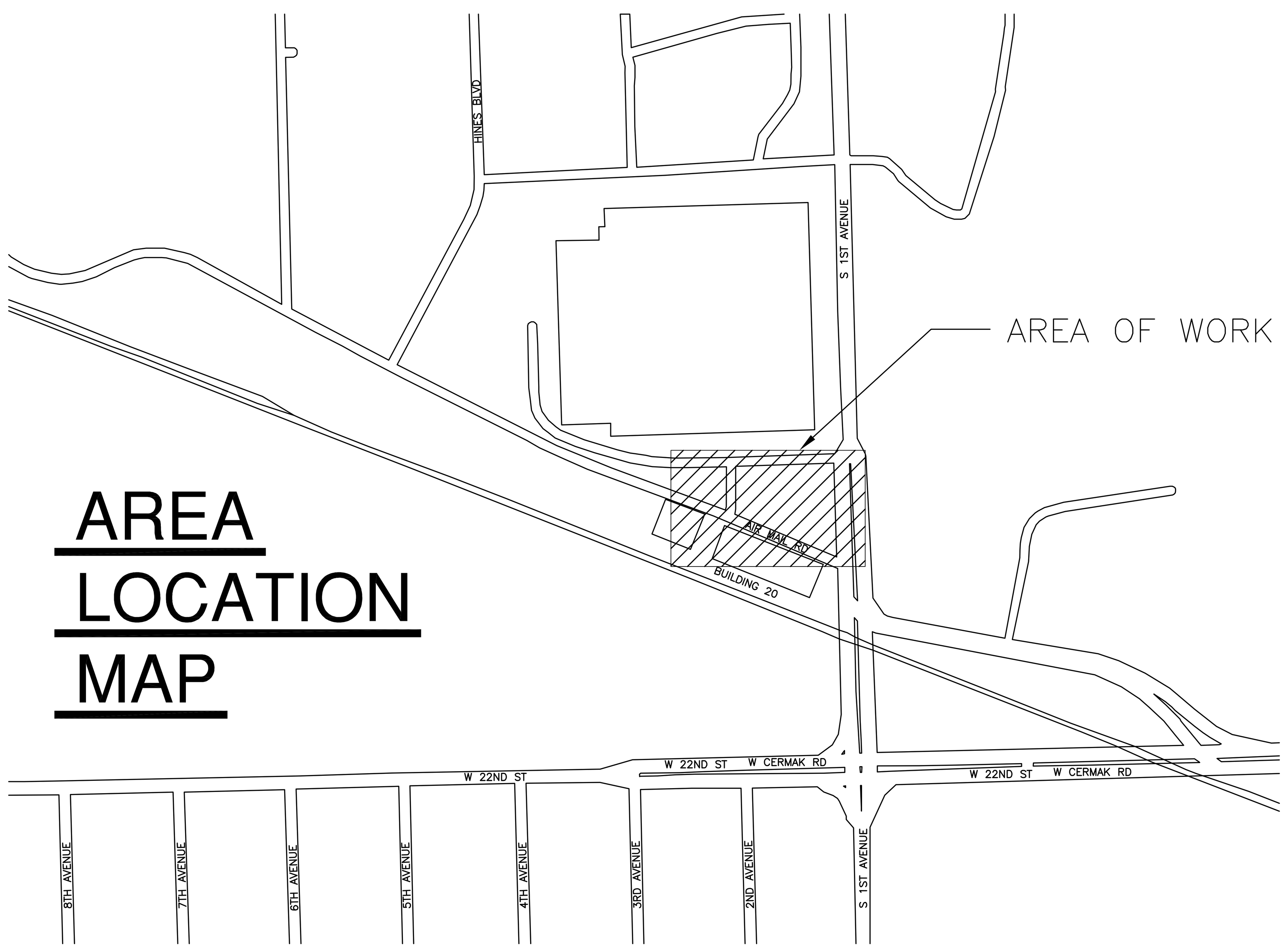
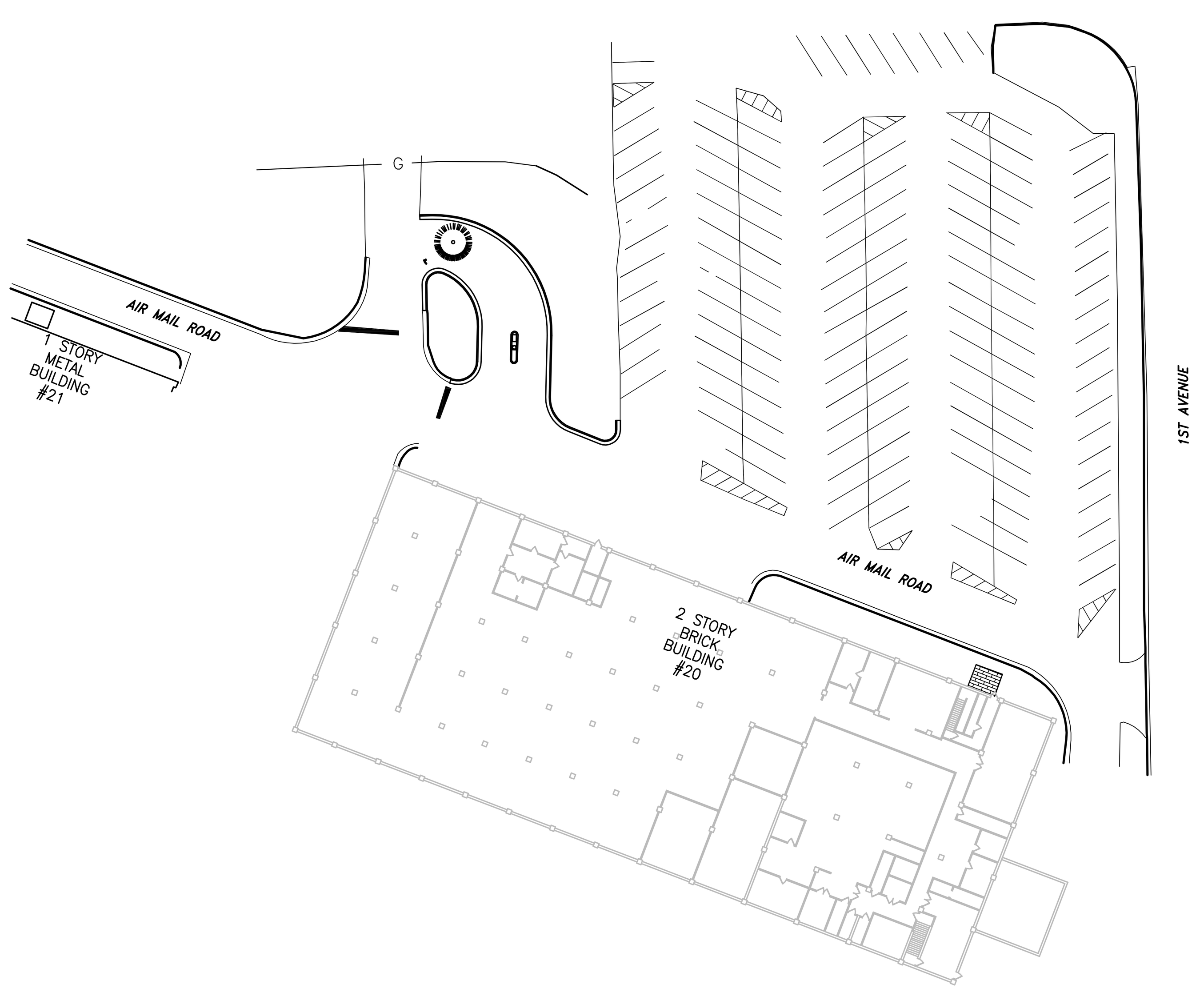
LOCATION MAP



AREA LOCATION MAP

SITE PLAN



VISN 12 A/E IDIQ
BUILDING 20 E-85 FUEL STATION DESIGN
EDWARD HINES, JR. VA MEDICAL CENTER
2100 S 5th Ave #111L
HINES, IL 60141

VA CONTRACT NUMBER VA 701-12-D-0031, VA 701-12-D-0032

VA TASK ORDER NUMBER VA 701-13-J-0122

CANNON DESIGN PROJECT NUMBER 004342.00

ISSUED FOR BID

SHEET INDEX

DRAWING NUMBER	DRAWING TITLE
	GENERAL DRAWINGS
G.1	COVER SHEET
	CIVIL DRAWINGS
C0.1	CIVIL GENERAL NOTES
C0.2	CIVIL TOPOGRAPHIC SURVEY
C1.0	CIVIL DEMOLITION PLAN
C2.0	CIVIL DIMENSION PLAN
C3.0	CIVIL GRADING PLAN
C4.0	CIVIL UTILITY PLAN
C5.0	CIVIL DETAILS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE DETAILS
	STRUCTURAL DRAWINGS
SS0.01	STRUCTURAL PLAN AND DETAILS
	MECHANICAL DRAWINGS
M0.01	MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS
M0.51	MECHANICAL SITE PLAN
M5.01	MECHANICAL DETAILS
M6.01	MECHANICAL CONTROL DIAGRAMS
	ARCHITECTURAL DRAWINGS
A1.01	ARCHITECTURAL FIRST FLOOR PLAN
	ELECTRICAL DRAWINGS
E0.01	ELECTRICAL AND TELECOMMUNICATION SYMBOLS, NOTES & ABBREVIATIONS
E1.51	ELECTRICAL OVERALL PLAN
E4.01	ELECTRICAL AND TELECOMMUNICATION ENLARGED PLANS AND SECTIONS
E5.01	ELECTRICAL AND TELECOMMUNICATION ONE-LINE DIAGRAMS
E6.01	ELECTRICAL SCHEDULES
E7.01	ELECTRICAL DETAILS
E7.02	ELECTRICAL DETAILS

APPLICABLE CODES

CODE
AMERICAN WITH DISABILITIES ACT 2008
ILLINOIS ACCESSIBILITY CODE 1997
ILLINOIS ADMINISTRATIVE CODE, TITLE 35 2010
ILLINOIS ADMINISTRATIVE CODE, TITLE 41 2003
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 10 2010
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 30 2008
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 30A 2008
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 51B 2009
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 70 2011
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 101 2012
NATIONAL FIRE PROTECTION ASSOCIATION, NFPA 241 2009
OCCUPATIONAL SAFETY AND HEALTH ACT, 29 CFR 1926
VHA DIRECTIVE 2005-007

Revisions		Date
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1	ISSUED FOR BID	1.31.14

CANNONDESIGN

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Approved:

Chief, FMS: ______

Chief of Projects: ______

Chief of Safety: ______

Chief of Staff: ______

ED Director: ______

Infection Control: ______

Drawing Title: COVER SHEET

Approved: Chief of Engineering — Date

Approved: Director — Date

Project Title: E-85 FUEL STATION BUILDING 20 — EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 -SITE PLAN

Checked

Drawn

Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14

Project No.: VA 701-13-R-0103

DRAWING NO.: G.1

DEPARTMENT OF VETERANS AFFAIRS

SURVEY LEGEND:

BUILDING
CONCRETE
ASPHALT
DEPRESSED CURB
CHAIN LINK FENCE
IRON FENCE
WOOD FENCE
GUARDRAIL
FOUND PK NAIL
FOUND REBAR
SET MAG NAIL
SET/FOUND CUT CROSS
COMBINATION SEWER
SANITARY SEWER
STORM SEWER
WATER LINE
GAS LINE
COMMUNICATION LINE
SBC COMMUNICATION LINE
TELEPHONE LINE
OHW — OVERHEAD WIRE LINE
UGE — UNDERGROUND ELECTRIC LINE
x BC17.09 — BACK OF CURB ELEVATION
x FL17.68 — FLOW LINE ELEVATION
x EP17.23 — EDGE OF PAVEMENT ELEVATION
x FF17.38 — FINISH FLOOR ELEVATION
MANHOLE
WATER MANHOLE
ELECTRIC MANHOLE
TELEPHONE MANHOLE
CURB INLET
CATCH BASIN
AREA DRAIN
POWER POLE W/GUY WIRE
UTILITY POLE
LIGHT POLE
FIRE HYDRANT
GAS VALVE
GAS METER
ELECTRIC METER
BUFFALO BOX
WATER VALVE
TREE-DECIDUOUS
TREE-EVERGREEN
BUSH
POST
SIGN
BOLLARD
SPRINKLER
CLEANOUT

BENCHMARKS:

SITE BM # 1 CARDNO MONUMENT NUMBER 329
REBAR & CAP

Elevation = 622.571

SITE BM # 2 CARDNO MONUMENT NUMBER 323
REBAR & CAP

Elevation = 620.233

SITE BM # 3 MAG NAIL (NOTED ON PLAT)

Elevation = 621.32

SITE BM # 4 MAG NAIL (NOTED ON PLAT)

Elevation = 622.24

GENERAL NOTES:

1. THE SURVEY BASE PROVIDED HEREIN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SITE CONDITIONS.

2. THE PROPERTY LINE SHOWN ON THESE DRAWINGS IS TAKEN FROM RECORD INFORMATION AND WAS NOT SURVEYED IN THE FIELD. THE PROPERTY LINE SHOWN IS APPROXIMATE ONLY. PROPERTY LINE WAS TAKEN FROM THE RECORD DRAWING TITLED "VETERANS ADMINISTRATION HOSPITAL, SHEET NO. 4 TOPOGRAPHY", DATED AUGUST 21ST, 1964 AS PREPARED BY CHICAGO GUARANTEE SURVEY COMPANY FOR THE VETERANS ADMINISTRATION, SURVEY ORDER NUMBER 6312013, LAST REVISED JANUARY 6, 1965.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH ACTUAL CONDITIONS AT THE JOB SITE. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLAN, THEY MUST IMMEDIATELY REPORT SAME TO THE ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITIES. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAIL, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES, FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THIER OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND PAYING THE REQUISITE FEES FOR CONSTRUCTION. THEY SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.

5. THE CONTRACTOR MUST COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES.

6. ALL WORK AND MATERIALS WHICH DO NOT CONFORM TO THE SPECIFICATIONS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

7. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

8. ALL DISTURBED AREAS SHALL BE RESTORED BY THE CONTRACTOR TO THE ORIGINAL CONDITION.

9. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL SPECIFICATION'S ISSUED IN A SEPARATE BINDER ARE TO BE CONSIDERED AS THE CONSTRUCTION DOCUMENTS AS ONE ENTITY.

DEMOLITION NOTES:

1. THE EXTENT OF DEMOLITION WORK IS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN AND INCLUDES, BUT IS NOT LIMITED TO THE REMOVAL OF ALL UTILITIES, OVERHEAD LINES AND POLES, PAVING, VEGETATION AND OTHER SITE FEATURES WHICH CONFLICT WITH THE CONSTRUCTION OF THE NEW FACILITIES, OR ARE DESIGNATED TO BE REMOVED.

2. CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS AND SPOILS TO ENSURE MINIMAL INTERFERENCE WITH FACILITY OPERATIONS.

3. ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION. REMOVE FROM SITE ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION AND LAWFULLY DISPOSE OF SAME.

4. NOTIFY OWNER 48 HOURS IN ADVANCE OF ANY UTILITY SHUTDOWN.

5. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER/ENGINEER ALL ITEMS DESIGNATED TO BE REMOVED OR RELOCATED.

6. IF ANY ITEMS ARE ENCOUNTERED IN THE FIELD THAT ARE NOT SHOWN ON THE PLAN WHICH REQUIRE DEMOLITION OR RELOCATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

7. THE CONTRACTOR WILL PROTECT ALL UTILITIES DESIGNATED TO REMAIN. ANY DAMAGE BY THE CONTRACTOR TO UTILITIES, ALLEYWAYS, STREETS OR ADJACENT PROPERTIES WILL BE REPLACED/REPAIRED AT THE CONTRACTOR'S EXPENSE.

8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ALL EXISTING SERVICES AND APPURTENANCES TO DEMOLISHED SITE FEATURES AND CAP/TERMINATE AS REQUIRED BY THE UTILITY COMPANY. CONTRACTOR SHOULD CONTACT OWNER/ENGINEER IF ANY QUESTION ARISES REGARDING THE VIABILITY OF A UTILITY STRUCTURE.

GRADING NOTES:

1. CONTRACTOR TO ADJUST RIMS OF ALL EXISTING STRUCTURES TO MEET NEW GRADES.

2. FOR PRIVATE SIDEWALKS, THE MAXIMUM CROSS-SLOPE SHALL NOT EXCEED 2.0%, THE MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5.0%.

3. ELEVATIONS SHOWN ARE PER NAVD 88 DATUM.

DIMENSION NOTES:

1. ALL DIMENSIONS ARE FROM FACE OF CURB, FACE OF BUILDING, EDGE OF PAVEMENT, PROPERTY LINE OR POINT OF TANGENCY UNLESS OTHERWISE NOTED.

UTILITY NOTES:

1. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES SHALL BE OBTAINED FROM ALL UTILITY COMPANIES, INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK IN THE CONSTRUCTION AREA. EXCAVATION IN THE VICINITY OF EXISTING STRUCTURES SHALL BE PERFORMED BY HAND. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING FACILITIES, MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

2. THE CONTRACTOR IS TO UNCOVER ALL LINES BEING TIED INTO AND VERIFY GRADES BEFORE ANY CONSTRUCTION.

3. CALL JULIE (800) 892-0123 PRIOR TO DIGGING FOR ANY UTILITY CONSTRUCTION.

4. A WATER MAIN SHALL BE SEPARATED FROM A SEWER SO THAT ITS INVERT IS A MINIMUM OF 18 INCHES ABOVE THE CROWN OF THE SEWER. WHENEVER WATER MAINS CROSS STORM SEWERS, SANITARY SEWERS OR SEWER SERVICE CONNECTIONS, THIS VERTICAL SEPARATION SHALL BE MAINTAINED. A LENGTH OF WATER MAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN. A TEN FOOT HORIZONTAL SEPARATION BETWEEN ALL WATER AND SEWER PIPES SHALL BE MAINTAINED.

5. WHEN IT IS IMPOSSIBLE TO OBTAIN THE PROPER SEPARATION AS DESCRIBED ABOVE, OR THE WATER MAIN PASSES UNDER A SEWER OR DRAIN, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION.

DUTY TO INDEMNIFY

THE CONTRACTOR SHALL DEFEND, INDEMNIFY, KEEP SAFE HARMLESS THE MUNICIPALITY, OWNER AND ENGINEER, AND THEIR RESPECTIVE BOARD MEMBERS, REPRESENTATIVES, AGENTS AND EMPLOYEES, IN BOTH INDIVIDUAL AND OFFICIAL CAPACITIES, AGAINST ALL SUITS, CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES, CAUSED BY, GROWING OUT OF, OR INCIDENTAL TO THE PERFORMANCE OF WORK UNDER THE CONTRACT BY THE CONTRACTOR OR ITS SUBCONTRACTORS TO THE FULL EXTENT AS ALLOWED BY THE LAWS OF THE STATE OF ILLINOIS AND NOT BEYOND ANY EXTENT WHICH WOULD RENDER THESE PROVISIONS VOID OR UNENFORCEABLE. THIS OBLIGATION INCLUDES BUT IS NOT LIMITED TO: THE ILLINOIS LAWS REGARDING STRUCTURAL WORK [IL REV. STAT. CH 48, PAR. 60 AT SEQ.] AND REGARDING THE PROTECTION OF ADJACENT LANDOWNERS [IL. REV. STAT. CH. 17-1/2 PAR. 51 ET. SEQ.]. IN THE EVENT OF ANY SUCH INJURY [INCLUDING DEATH] OR LOSS OR DAMAGE, OF CLAIMS THEREFORE, OR CLAIMS THEREFORE, THE CONTRACTOR SHALL GIVE PROMPT NOTICE TO THE OWNER.

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1	ISSUED FOR BID	1.31.14
Revisions		Date

CANNONDESIGN
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Baltimore Boston Buffalo Chicago Jacksonville Los Angeles New York
St. Louis Vancouver Washington DC

Approved:
Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: CIVIL GENERAL NOTES

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Approved: Chief of Engineering — Date
Approved: Director — Date

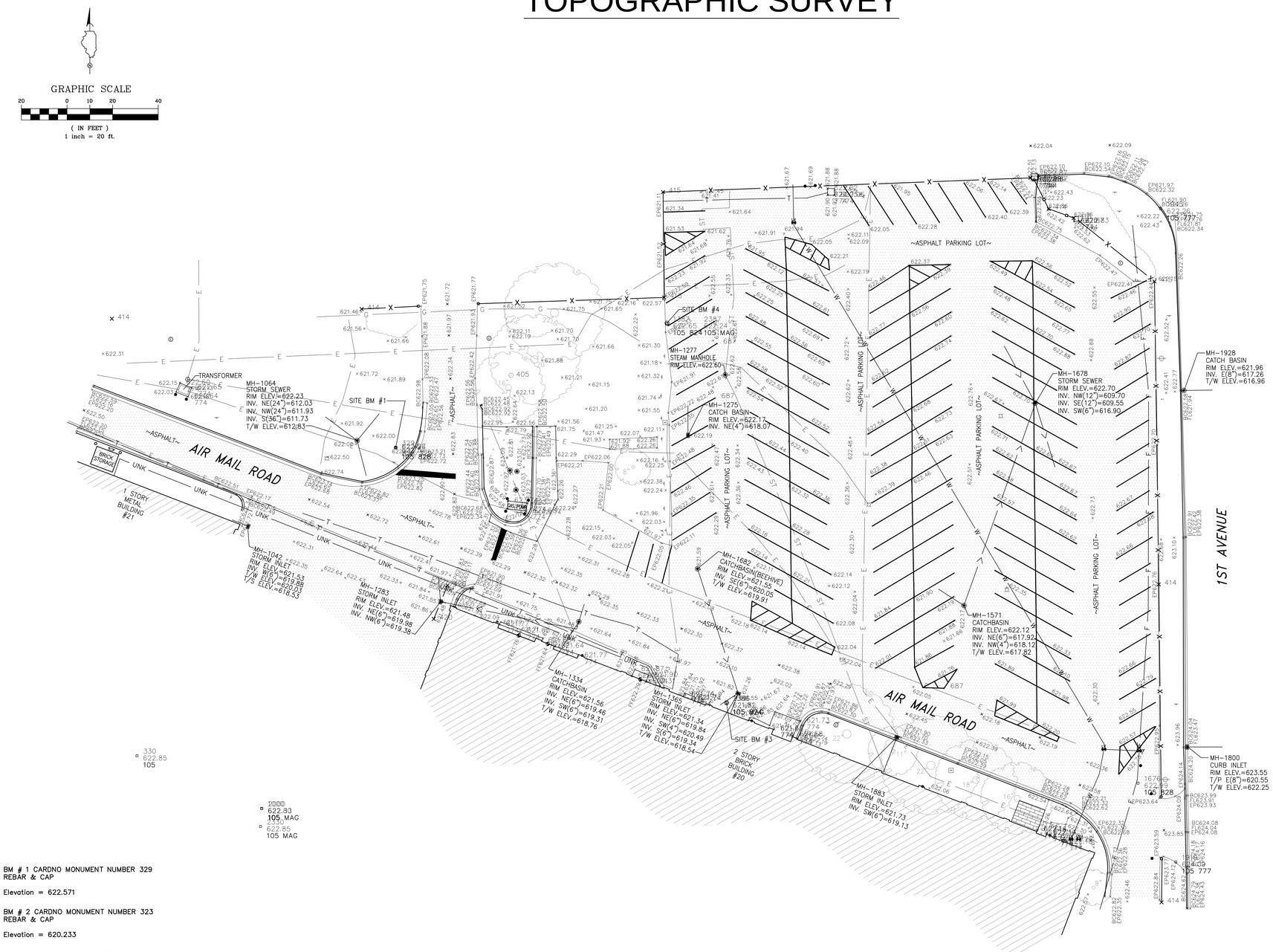
Building Number & Floor: BUILDING 20 –SITE PLAN
Checked:
Drawn:
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: C0.1

DEPARTMENT OF VETERANS AFFAIRS

three inches = one foot
one and one-half inches = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot

TOPOGRAPHIC SURVEY



LEGEND AND ABBREVIATIONS:

- BUILDING
- CONCRETE
- ASPHALT
- DEPRESSED CURB
- CHAIN LINK FENCE
- IRON FENCE
- WOOD FENCE
- GUARDRAIL
- FOUND PK NAIL
- FOUND REBAR
- SET MAG NAIL
- SET/FOUND CUT CROSS
- COMBINATION SEWER
- SANITARY SEWER
- STORM SEWER
- W — WATER LINE
- G — GAS LINE
- COM — COMMUNICATION LINE
- SBC — SBC COMMUNICATION LINE
- T — TELEPHONE LINE
- OHW — OVERHEAD WIRE LINE
- UGE — UNDERGROUND ELECTRIC LINE
- × BC17.09 — BACK OF CURB ELEVATION
- × FL17.68 — FLOW LINE ELEVATION
- × EP17.23 — EDGE OF PAVEMENT ELEVATION
- × FF17.38 — FINISH FLOOR ELEVATION
- MANHOLE
- WATER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- CURB INLET
- CATCH BASIN
- AREA DRAIN
- POWER POLE W/GUY WIRE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- GAS VALVE
- GAS METER
- ELECTRIC METER
- BUFFALO BOX
- WATER VALVE
- TREE–DECIDUOUS
- TREE–EVERGREEN
- BUSH
- POST
- SIGN
- BOLLARD
- SPRINKLER
- CLEANOUT

BM # 1 CARDNO MONUMENT NUMBER 329
REBAR & CAP

Elevation = 622.571

BM # 2 CARDNO MONUMENT NUMBER 323
REBAR & CAP

Elevation = 620.233

SITE BM # 3 MAG NAIL (NOTED ON PLAT)

Elevation = 621.32

SITE BM # 4 MAG NAIL (NOTED ON PLAT)

Elevation = 622.24

STATE OF ILLINOIS
COUNTY OF COOK

This is to certify that I, an Illinois Professional Land Surveyor, have surveyed the property described in the caption above, and that this Professional service conforms to the current Illinois Minimum Standards for a topographic survey.

Given under my hand and seal in Chicago, Illinois, this 23rd day of September, 2013.

THOMAS E. BAUMGARTNER, ILLINOIS LAND SURVEYOR NO. 3142
LICENSE EXPIRATION 11–30–2014

Field work completed September 18, 2013.

PROFESSIONAL LAND SURVEYOR — THOMAS E. BAUMGARTNER 35–3142 CHICAGO — STATE OF ILLINOIS

NOTE: TERRA ENGINEERING does not guarantee the accuracy of this survey unless it contains an original seal and signature.

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Chicago, IL 60654
TEL: (312) 467-0123
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Project Information

PROJECT #: 13-217
DRAWN BY: BM/KR
DESIGN BY: TB
CHECKED BY: TB

I FURTHER STATE that the accompanying plat is a scaled representation of the physical situation which I found in the field and shows the location of visible evidence of utilities which I found at the time of my survey of these premises, and underground based on supplied plans. No attempt has been made as part of this survey to excavate, uncover or expose those facilities to field check the existence, size, depth, condition, capacity or exact location of those facilities. For more information concerning those utilities, please contact the appropriate public agencies or utility company.

Revisions	Date
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1 ISSUED FOR BID	1.31.14

CANNONDESIGN
225 North Michigan Avenue, Suite 1100, Chicago, Illinois 60601 312.332.9600
Baltimore Boston Buffalo Chicago Jacksonville Los Angeles New York St. Louis Vancouver Washington DC

Approved:

Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: VA HINES FUELING STATION

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Approved: Chief of Engineering — Date

Approved: Director — Date

Building Number & Floor: BUILDING 20 –SITE PLAN

Checked

Drawn

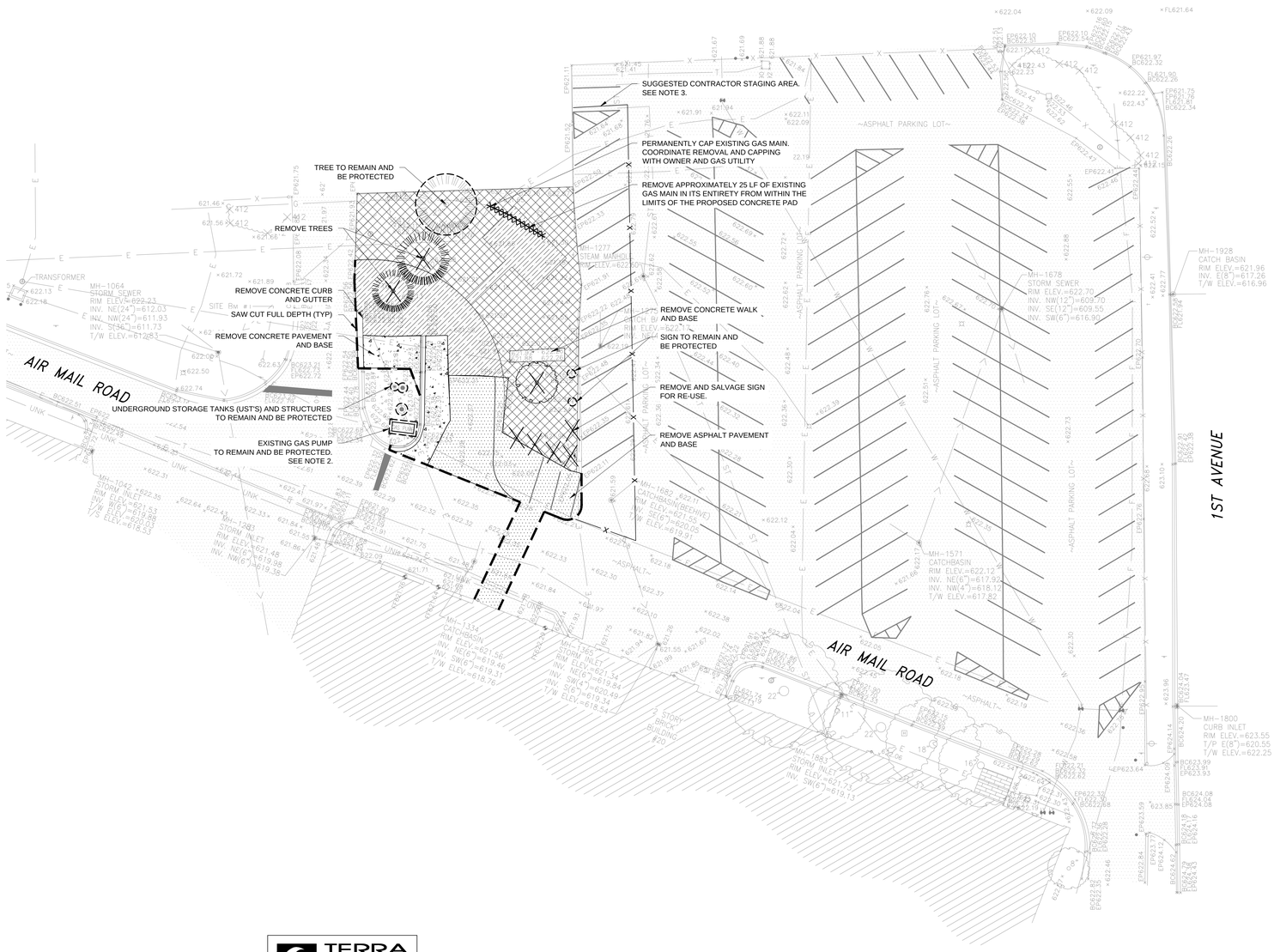
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14

Project No.: VA 701-123-R-0103

DRAWING NO.: C0.2

DEPARTMENT OF VETERANS AFFAIRS



GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

LEGEND AND ABBREVIATIONS:

- REMOVE CONCRETE PAVEMENT AND BASE
- REMOVE ASPHALT PAVEMENT AND BASE
- STRUCTURE TO REMAIN AND BE PROTECTED
- REMOVE STRUCTURE / TREE
- SAWCUT (FULL DEPTH)
- SUGGESTED CONTRACTOR STAGING AREA LIMITS
- REMOVE CONCRETE CURB AND GUTTER
- REMOVE CONCRETE BARRIER CURB
- CLEAR AND GRUB AREA. REMOVE EXISTING SOD FOR RE-GRADE
- CLEAR AND GRUB AREA. REMOVE EXISTING SOD AND TOPSOIL TO SUITABLE SUBGRADE AND STOCKPILE TOPSOIL ON-SITE FOR RE-USE

NOTE :

1. CONTRACTOR TO PROVIDE AND MAINTAIN TEMPORARY STEEL PLATES HAVING A MINIMUM LOAD RATING OF HS-20 OVER UTILITY TRENCHES ACROSS AIR MAIL ROAD DURING CONSTRUCTION UNTIL CONCRETE ENCASEMENT FOR CONDUIT HAS HAD A MINIMUM 24-HRS TIME TO CURE AND THE PAVEMENT RESTORED PER VA REQUIREMENTS AND AS SHOWN ON DETAIL #6 OF DRAWING SHEET C5.0. THE STEEL PLATE SHALL BE LARGE ENOUGH TO SPAN THE UTILITY TRENCH OPENING WITH SUFFICIENT OVERLAP AND SHALL BE FIRMLY BEDDED AND SECURED TO PREVENT ROCKING OR MOVEMENTS. CONTRACTOR TO PROVIDE AND MAINTAIN TEMPORARY SIGNAGE REGARDING VEHICULAR AND PEDESTRIAN TRAFFIC AROUND AREA DURING CONTRSUCTION.
2. ACCESS TO THE EXISTING GAS PUMP SHALL BE MAINTAINED FOR AS LONG AS POSSIBLE. TEMPORARY CLOSURES UP TO ONE DAY SHALL BE COORDINATED WITH VA STAFF. CLOSURES LONGER THAN ONE DAY SHALL NOT BE PERMITTED. CONTRACTOR SHALL NOTIFY ORLANDO TAYLOR, VA EMS-OPERATIONS, AT 1-708-202-2393 A MINIMUM OF 48-HOURS IN ADVANCE OF ANY CLOSURE FOR COORDINATION.
3. STAGING AREA SHOWN IS SUGGESTED. CONTRACTOR TO COORDINATE STAGING AREA LOCATION AND LIMITS WITH VA STAFF. FAR WEST ANGLED PARKING STALLS ARE SHOWN AS THE SUGGESTED AREA FOR STAGING BASED ON DISCUSSIONS WITH VA STAFF. CONTRACTOR SHALL PROVIDE AND MAINTAIN A 6.0 FT. TALL CHAIN LINK FENCE AROUND THE PERIMETER OF THE STAGING AREA. CONTRACTOR SHALL NOTIFY ORLANDO TAYLOR, VA EMS-OPERATIONS, AT 1-708-202-2393 A MINIMUM OF 72-HOURS IN ADVANCE OF DEMOLITION OR CONSTRUCTION SITE ACTIVITIES TO COORDINATE LIMITS OF STAGING AREA AND MOVING VEHICLES FROM WITHIN AREA.
4. ALL TOPSOIL THAT IS REMOVED DURING DEMOLITION ACTIVITIES SHALL BE STOCKPILED AND REMAIN ON SITE FOR RE-SPREAD.

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Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: CIVIL DEMOLITION PLAN

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

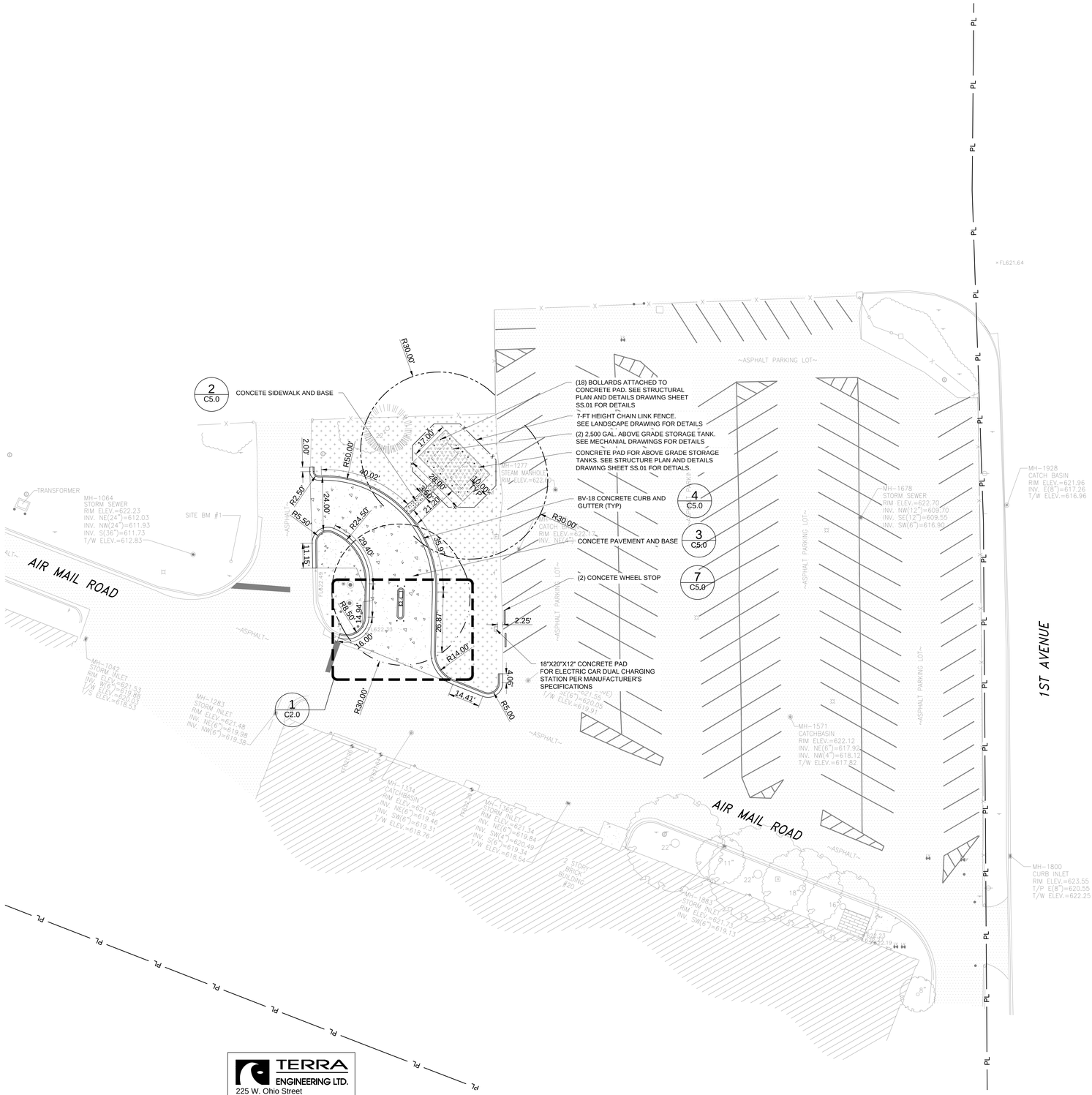
Date: 01/31/14
Project No.: VA 701-13-R-0103

Approved: Chief of Engineering Date
Approved: Director Date

Building Number & Floor: BUILDING 20 -SITE PLAN
Checked:
Drawn:
Location: 2100 S 5th Ave #111L Hines, IL 60141

DRAWING NO.: C1.0

DEPARTMENT OF VETERANS AFFAIRS



GRAPHIC SCALE

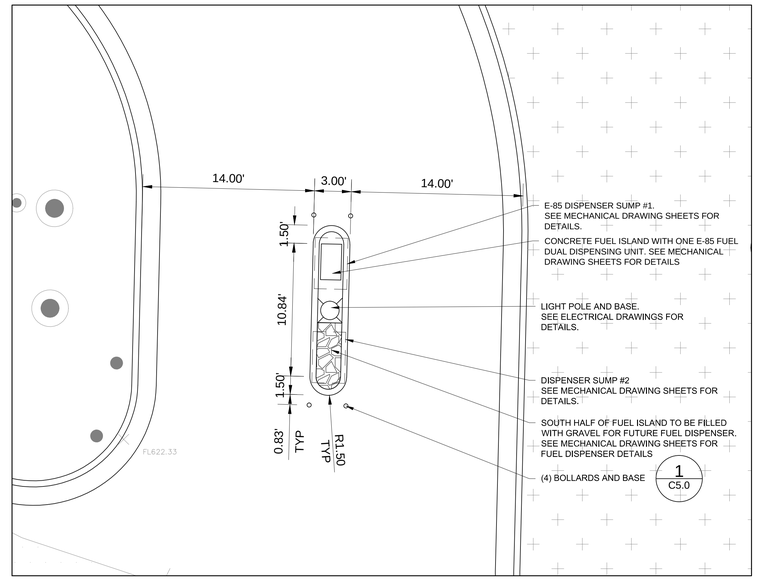
20 0 10 20 40

(IN FEET)

1 inch = 20ft.

LEGEND AND ABBREVIATIONS:

- PL — PROPERTY LINE (PER RECORD) SEE NOTE 2 OF "GENERAL NOTES" ON SHEET C0.1 FOR DETAILS
- CONCRETE PAVEMENT AND BASE
- CONCRETE SIDEWALK AND BASE
- CONCRETE PAD FOR ABOVE STORAGE TANK. SEE STRUCTURAL DRAWING SHEET SS.01 FOR DETAILS
- CONCRETE CURB AND GUTTER
- CONCRETE BARRIER CURB
- XX / XX-XXX — DETAIL NUMBER, SHEET NUMBER
- CHAIN LINK FENCE. SEE LANDSCAPE DRAWINGS FOR DETAILS.
- GRAVEL
- 30-FT VEHICLE FUELING SEPARATION LIMIT
- 30-FT AST E-85 FUEL TANK SEPARATION LIMIT



1 FUEL ISLAND DIMENSION ENLARGEMENT PLAN

SCALE: 1:5

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Revisions		Date

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Baltimore Boston Buffalo Chicago Jacksonville Los Angeles New York St. Louis Vancouver Washington DC

Approved:

Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: CIVIL DIMENSION PLAN

Approved: Chief of Engineering Date

Approved: Director Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 –SITE PLAN

Checked

Drawn

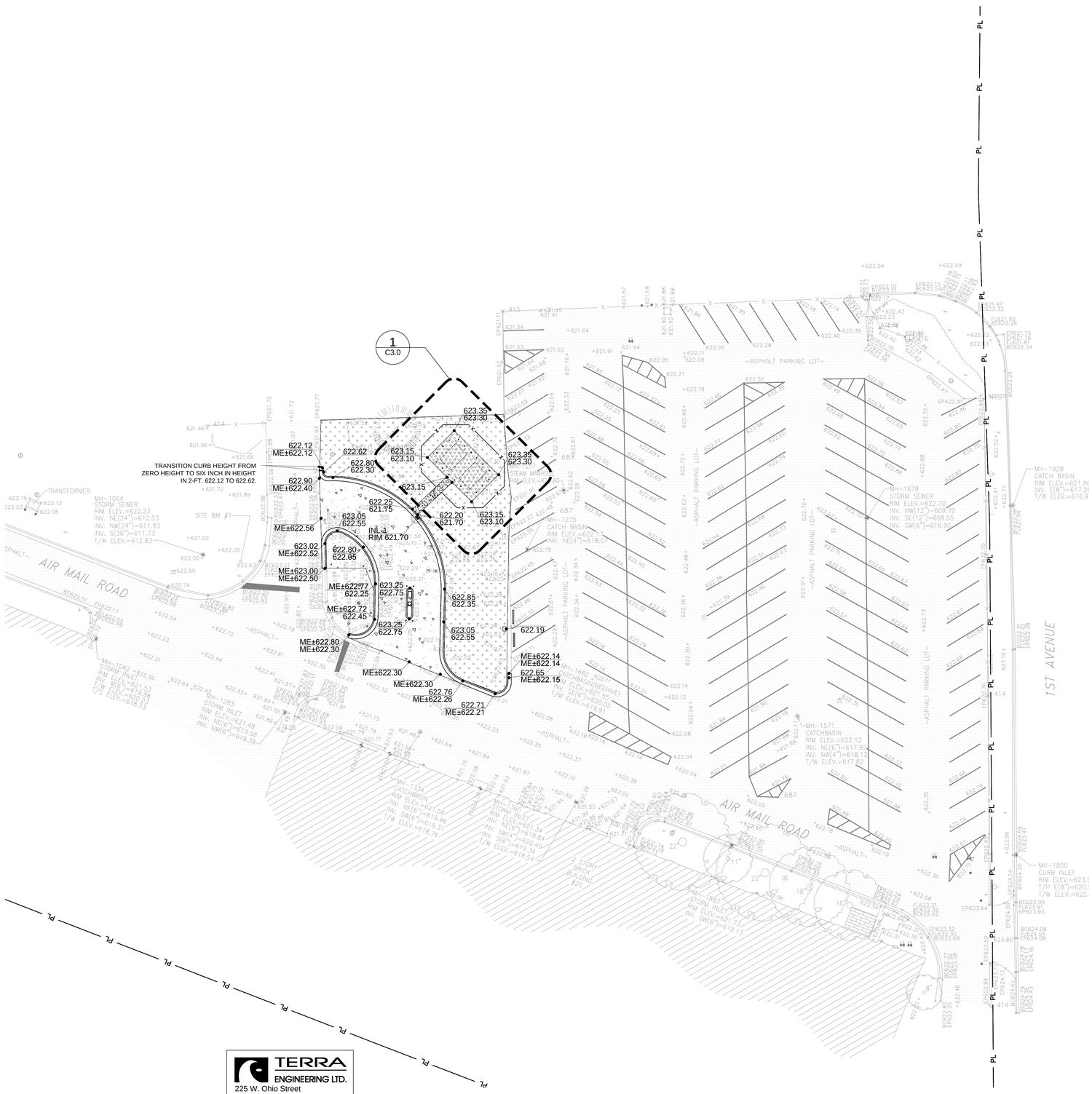
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14

Project No.: VA 701-13-R-0103

DRAWING NO.: C2.0

DEPARTMENT OF VETERANS AFFAIRS



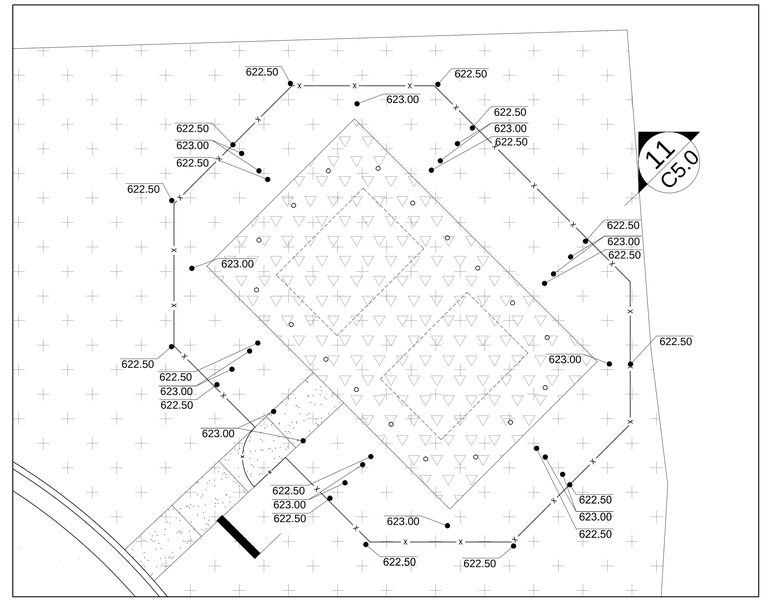
GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20ft.

LEGEND AND ABBREVIATIONS:

- PL — PROPERTY LINE (PER RECORD) SEE NOTE 2 OF "GENERAL NOTES" ON SHEET C0.1 FOR DETAILS
- CONCRETE PAVEMENT AND BASE
- CONCRETE SIDEWALK AND BASE
- CONCRETE PAD FOR ABOVE STORAGE TANK
- GRADE AND RE-SPREAD STOCKPILED TOPSOIL. REFER TO LANDSCAPE DRAWINGS FOR SOD AND PLANTING DETAILS.
- CONCRETE CURB AND GUTTER
- CONCRETE BARRIER CURB
- 2.0% — SLOPE
- STORMWATER RUN-OFF
- OF — OVERFLOW
- BACKFLOW PREVENTER
- CHAIN LINKE FENCE SEE LANSDACPE DRAWINGS FOR DETAILS
- INLET (INL)
- 14.80 / 14.20 — TOP OF CURB / BOTTOM OF CURB
- 14.20 — SPOT ELEVATION



1 AST GRADING ENLARGEMENT PLAN
SCALE: 1:5

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Chief of Projects: _____
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Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: CIVIL GRADING PLAN

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Date: 01/31/14

Project No.: VA 701-13-R-0103

Approved: Chief of Engineering — Date

Approved: Director — Date

Building Number & Floor: BUILDING 20 -SITE PLAN

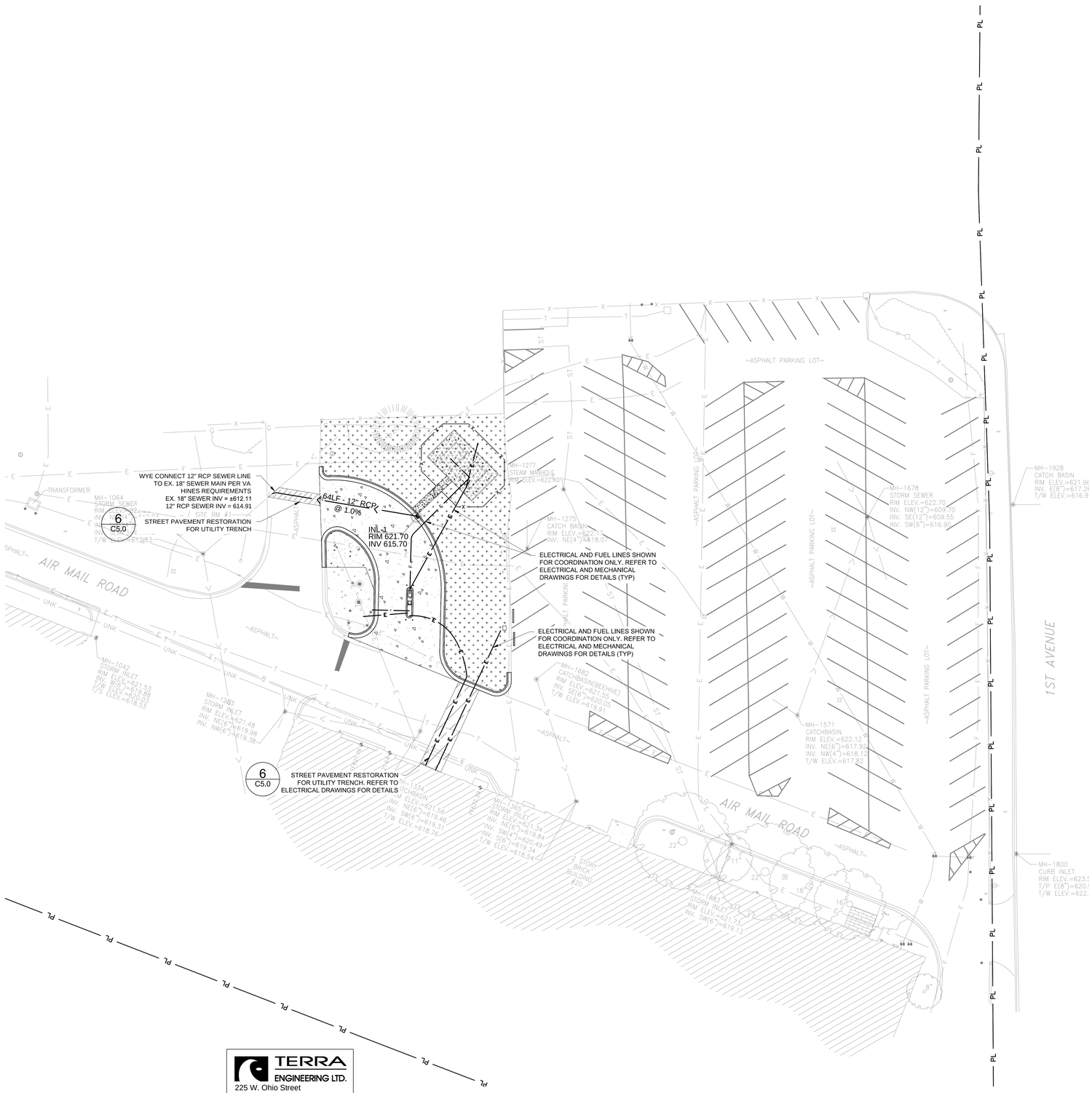
Checked

Drawn

Location: 2100 S 5th Ave #111L Hines, IL 60141

DRAWING NO.: C3.0

DEPARTMENT OF VETERANS AFFAIRS



GRAPHIC SCALE

20 0 5 10 20 40

(IN FEET)
1 inch = 20ft.

LEGEND AND ABBREVIATIONS:

- PL — PROPERTY LINE (PER RECORD) SEE NOTE 2 OF "GENERAL NOTES" ON SHEET C0.1 FOR DETAILS
- RESTORE PAVEMENT PER VA REQUIREMENTS. AREA SHOWN SCHEMATIC ONLY
- STORM LINE
- 20 — UTILITY CROSSING TAG
- INLET (INL)
- OF — OVERFLOW ELEVATION
- F — FUEL LINE. SEE MECHANICAL DRAWINGS FOR DETAIL
- E — ELECTRIC LINE. SEE ELECTRICAL DRAWINGS FOR DETAIL

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ED Director: _____
Infection Control: _____

Drawing Title: CIVIL UTILITY PLAN

Approved: Chief of Engineering Date

Approved: Director Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 –SITE PLAN

Checked

Drawn

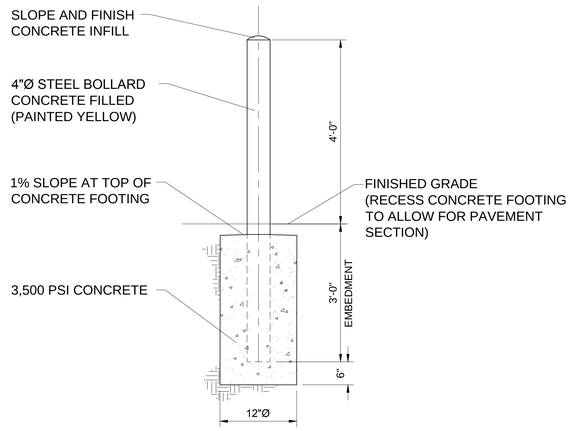
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14

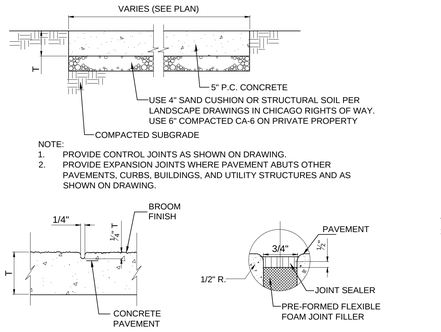
Project No.: VA 701-13-R-0103

DRAWING NO. C4.0

DEPARTMENT OF VETERANS AFFAIRS



1 BOLLARD DETAIL
SCALE: NTS

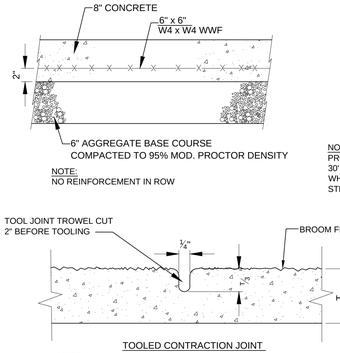


NOTE:
1. PROVIDE CONTROL JOINTS AS SHOWN ON DRAWING.
2. PROVIDE EXPANSION JOINTS WHERE PAVEMENT ABUTS OTHER PAVEMENTS, CURBS, BUILDINGS, AND UTILITY STRUCTURES AND AS SHOWN ON DRAWING.

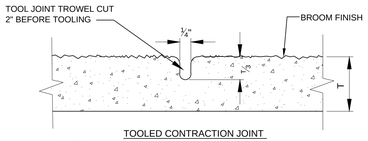
CONCRETE PAVEMENT CONTROL JOINT

EXPANSION JOINT - SEALING DETAIL

2 CONCRETE SIDEWALK AND BASE
SCALE: NTS



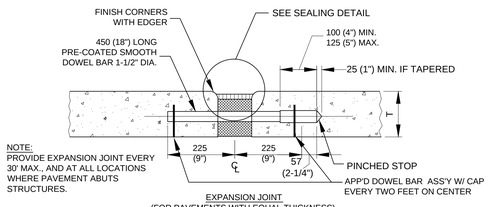
NOTE:
NO REINFORCEMENT IN ROW



TOOLED CONTRACTION JOINT

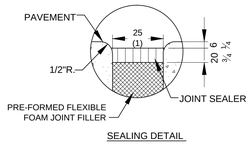
NOTE:
PROVIDE CONTRACTION JOINT EVERY 10' O.C. OR AS NOTED ON PLANS

3 CONCRETE PAVEMENT AND BASE
SCALE: NTS



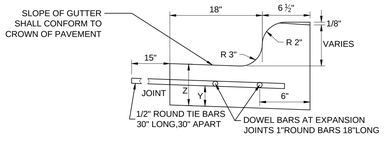
NOTE:
PROVIDE EXPANSION JOINT EVERY 30' MAX., AND AT ALL LOCATIONS WHERE PAVEMENT ABUTS STRUCTURES.

EXPANSION JOINT
(FOR PAVEMENTS WITH EQUAL THICKNESS)



SEALING DETAIL

4 BV-18 CONCRETE CURB AND GUTTER
SCALE: NTS



TYPE BV.18 CURB AND GUTTER

NOTE:

H = VARIABLE 3" TO 9"
X = THICKNESS OF PAVEMENT
Y = ONE HALF THE THICKNESS OF CONCRETE PAVEMENT OR CONCRETE BASE
Z = 10" OR THICKNESS OF PAVEMENT - WHICHEVER IS GREATER

NOTES:

1. TRANSVERSE JOINTS OF A TYPE SIMILAR TO THAT USED IN THE ADJACENT PAVEMENT SHALL BE INSTALLED AND ALIGNED WITH THE JOINTS IN THE ADJACENT PAVEMENT.
2. 1" THICK EXPANSION JOINTS COMPOSED OF BITUMINOUS PREFORMED JOINT FILLER SHALL BE INSTALLED IN THE CURB AND/OR GUTTER AT POINTS OF CURVATURE AND AT CONSTRUCTION JOINTS.
3. WHEN CURB & GUTTER IS CONSTRUCTED ADJACENT TO A FLEXIBLE BASE, TRACTION JOINTS SHALL ALSO BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT EXCEEDING 20 FEET.
4. ALL TIE BARS SHALL BE CORRUGATED AND ALL DOWEL BARS SHALL BE SMOOTH.
5. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED.

5 CONCRETE PAD FOR FUEL ISLAND
SCALE: NTS

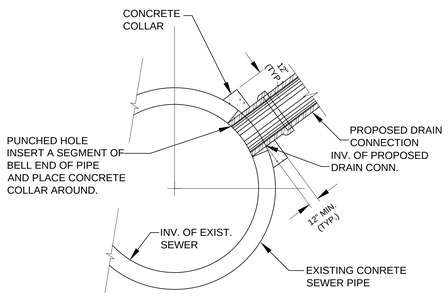
A 1 1/2" HOT MIX ASPHALT SURFACE COURSE ;RESIDENTIAL STREETS ; 1 3/4" INDUSTRIAL STREETS;(SUPERPAVE MIX)
B 2 1/2" HOT MIX ASPHALT BINDER COURSE
C BITUMINOUS MATERIAL & AGGREGATE (PRIME COAT)
D P.C. CONCRETE BASE COURSE

* PAVEMENT SHALL BE REMOVED TO NEAREST CONSTRUCTION JOINT IF TRENCH EDGE IS 2" OR LESS FROM JOINT (TO BE DETERMINED BY THE ENGINEER).
* * INCIDENTAL TO STORM SEWER, TYPE 2
* * * W = 9" + O.D. + 9", WHEN TRENCH DEPTH ≤ 5FT.
W = 18" + O.D. + 18", WHEN TRENCH DEPTH > 5FT.

NOTES:
1. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED.
2. THE PORTLAND CEMENT CONCRETE BASE SHALL BE 9 OR MORE INCHES. FOR CONCRETE STREETS THE CONCRETE SHALL BE BROUGHT TO GRADE (INCLUDING 1'-0" OVERLAP) AND APPROPRIATE FINISHED.
3. ALL EXISTING PAVEMENTS SHALL BE SAW CUT 1'-0" ON EITHER SIDE OF THE TRENCH OR PAVEMENT OPENING. UNDER NO CIRCUMSTANCES, SHOULD EXISTING PAVEMENT WHICH HAS BEEN UNDERMINED OR OTHERWISE DISTURBED BE LEFT IN PLACE AND NOT RESTORED.
4. ALL ARTERIAL STREET PAVEMENT WHICH HAS BEEN RECONSTRUCTED IN THE LAST SEVEN YEARS WILL REQUIRE PLACEMENT OF #5 DOWEL BARS, 18 INCHES LONG DRILLED AND GROUTED (NON SHRINK) AT 30" CENTERS ON ALL SIDES. A MINIMUM OF TWO DOWEL BARS WILL BE REQUIRED ON EACH SIDE OF SAW CUT BOUNDARIES.

6 STREET PAVEMENT RESTORATION FOR UTILITY TRENCH
SCALE: NTS

7 CONCRETE WHEEL STOP
SCALE: NTS



NOTE:
1. WATERTIGHT CONNECTION AS REQUIRED BY ASTM C-923.

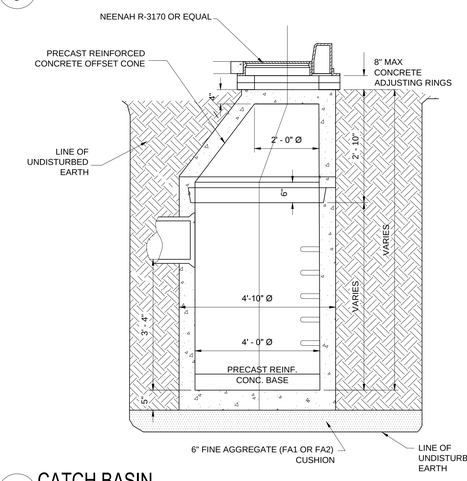
8 SEWER CONNECTION DETAIL
SCALE: NTS

SEWER

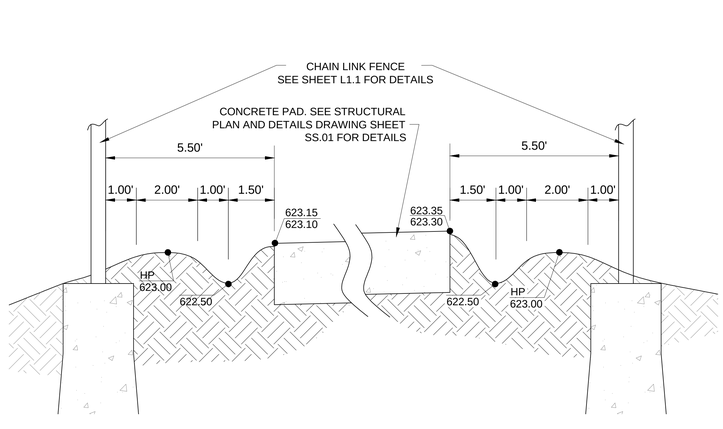
NOTES:

1. TRENCH WIDTH: PIPE SIZES UP TO 24", USE O.D. PLUS 20", PIPE SIZES OVER 24", USE O.D. PLUS 24".
2. BEDDING BELOW BOTTOM OF PIPE SHALL BE OF A THICKNESS EQUAL TO 1/4 OF PIPE OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 4" AND A MAXIMUM THICKNESS OF 8". PIPE BEDING SHALL EXTEND TO A DEPTH OF 12" ABOVE PIPE.

9 SEWER UTILITY TRENCH
SCALE: NTS



10 CATCH BASIN
SCALE: NTS



11 CROSS-SECTION OF INTERIOR BERM AT CONCRETE PAD
SCALE: HORZ 1:2 VERT 1:1

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Drawing Title: CIVIL DETAILS

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Date: 01/31/14
Project No.: VA 701-13-R-0103

Approved: Chief of Engineering Date
Approved: Director Date

Building Number & Floor: BUILDING 20 –SITE PLAN
Checked:
Drawn:
Location: 2100 S 5th Ave #111L Hines, IL 60141

DRAWING NO.: C5.0

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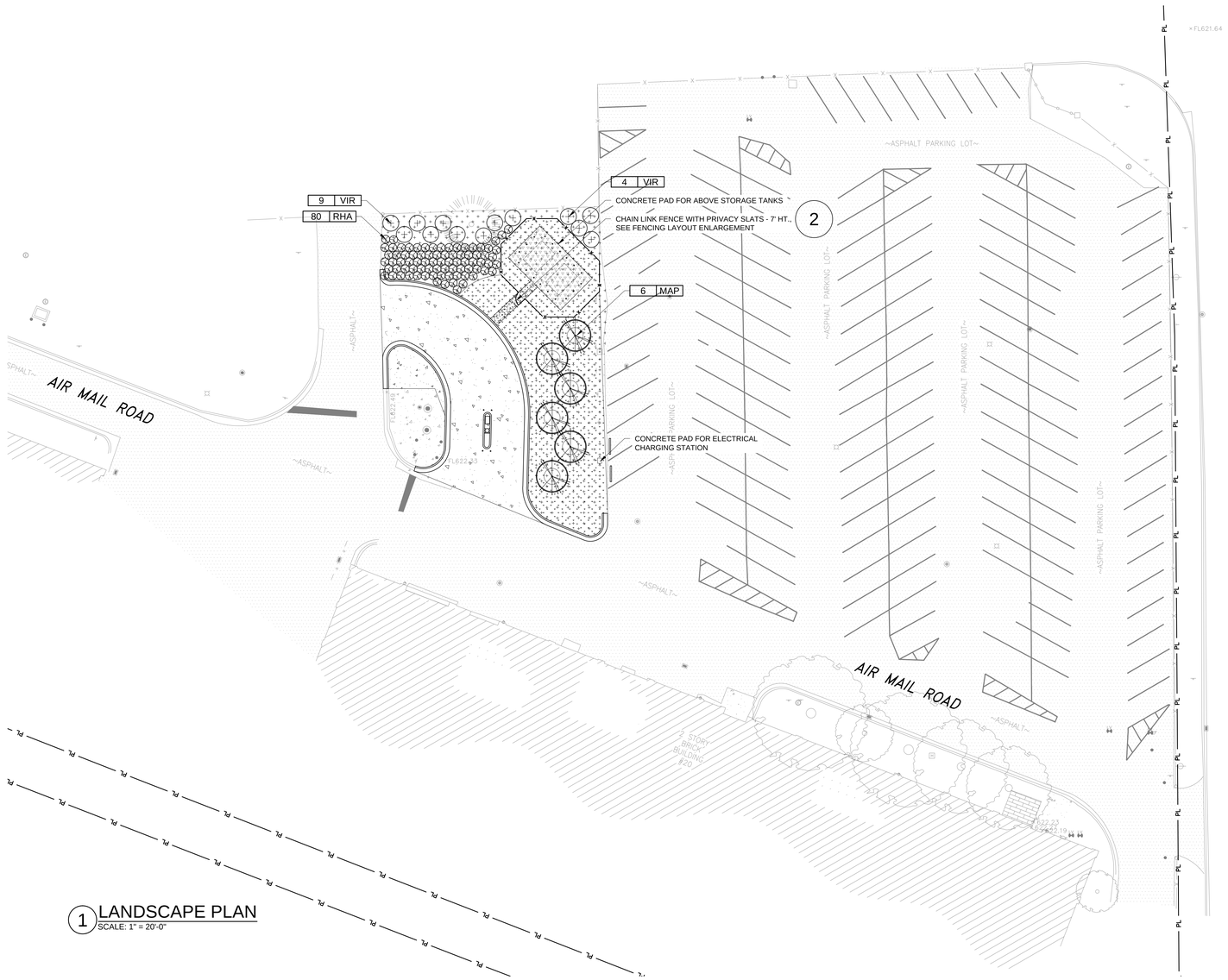


1 LANDSCAPE PLAN
SCALE: 1" = 20'-0"

GRAPHIC SCALE

20 0 10 20 40

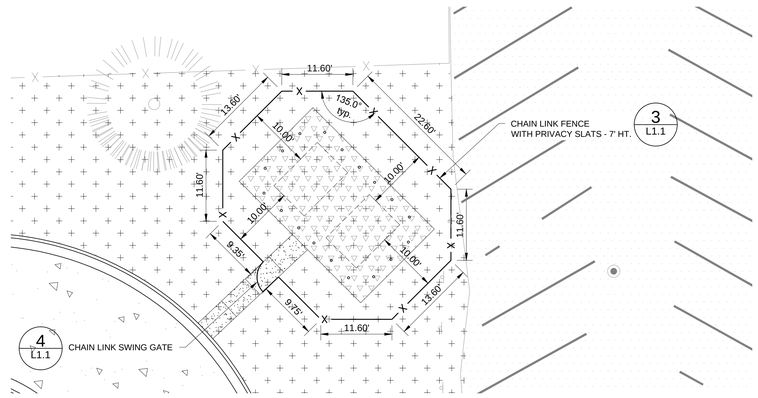
(IN FEET)
1 inch = 20ft.

LEGEND AND ABBREVIATIONS:

- EXISTING TREE TO BE PROTECTED
- ORNAMENTAL TREE
- DECIDUOUS SHRUBS
- CONCRETE PAVEMENT
- LAWN SOD
- PLANT CODE: 34 DEF — QUANTITY

Overall Plant Schedule

Qty.	Key	Botanical name	Common name	Size	Notes
		ORNAMENTAL TREES			
6	MAP	Malus 'Prairie Fire'	Prairie Fire Crabapple	8' Ht.	B&B
		DECIDUOUS SHRUBS			
80	RHA	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	24" Width	B&B
13	VIR	Viburnum rhytidophyllum	Leatherleaf Viburnum	36" Ht.	B&B



2 FENCING LAYOUT ENLARGEMENT PLAN
SCALE: 1" = 10'-0"

NOTES:

1. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL SPECIFICATION'S ISSUED IN A SEPARATE BINDER ARE TO BE CONSIDERED AS THE CONSTRUCTION DOCUMENTS AS ONE ENTITY.

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Drawing Title: LANDSCAPE PLAN
Approved: Chief of Engineering — Date
Approved: Director — Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL
Building Number & Floor: BUILDING 20 –SITE PLAN
Checked: WGS
Drawn: BAD
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: L1.0

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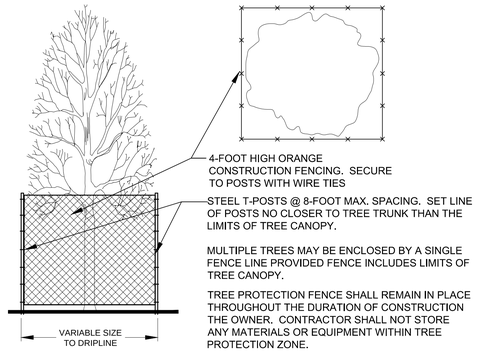
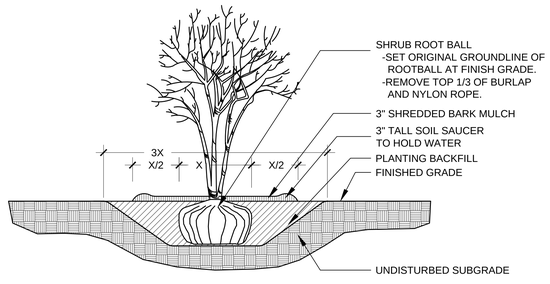
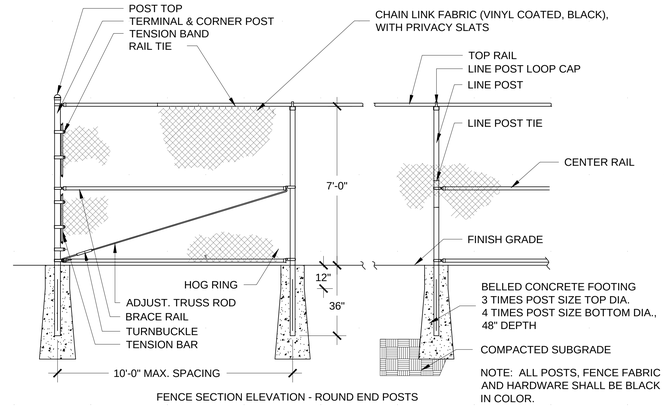


1 TREE PROTECTION DETAIL
NTS

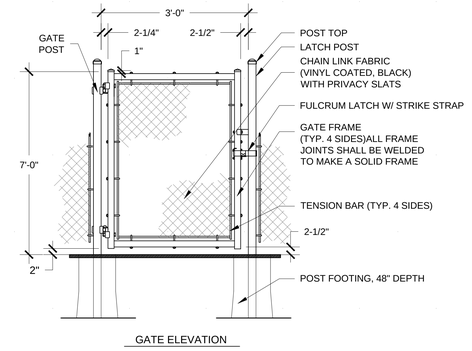


2 SHRUB AND ORNAMENTAL TREE PLANTING DETAIL
NTS



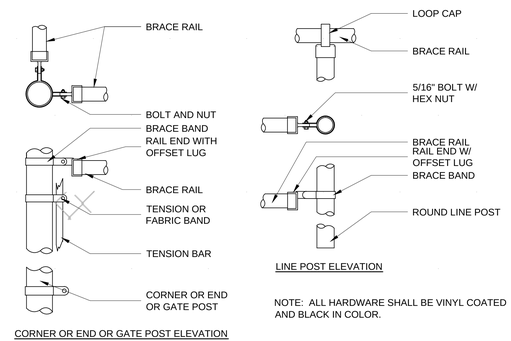
FENCE SECTION ELEVATION - ROUND END POSTS

3 CHAIN LINK FENCING
NTS



GATE ELEVATION

4 CHAIN LINK SWING GATE
SCALE: NTS



CORNER OR END OR GATE POST ELEVATION

LINE POST ELEVATION

NOTE: ALL HARDWARE SHALL BE VINYL COATED AND BLACK IN COLOR.

5 CHAIN LINK FENCE POST
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Drawing Title: LANDSCAPE DETAILS

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EDWARD HINES, JR. VA HOSPITAL

Approved: Chief of Engineering Date

Approved: Director Date

Building Number & Floor: BUILDING 20 -SITE PLAN

Checked: WGS

Drawn: BAD

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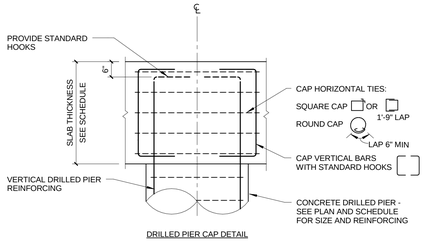
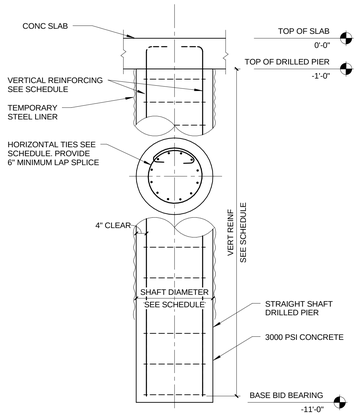


DRILLED PIER CAP DETAIL



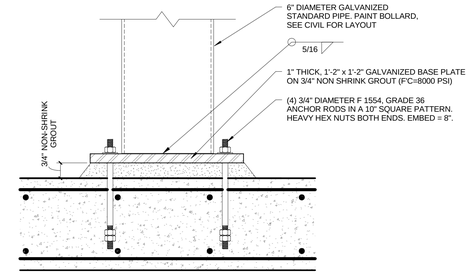
NOTES:
1. CONFIRM SOIL AT BEARING ELEVATION TO BE A MINIMUM OF 10,000 PSF ALLOWABLE.

CONCRETE DRILLED PIER SCHEDULE

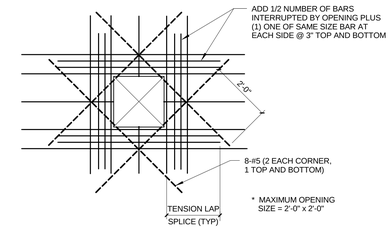
MARK	DRILLED PIER: SHAFT DIAMETER	VERTICAL REINFORCING	REINFORCING LENGTH	TIES	REMARKS
DP30	30"	10 - #8	FULL LENGTH	#4 @ 10"	

DRILLED PIER SCHEDULE NOTES:
1. SEE PLANS AND DETAILS FOR TOP OF DRILLED PIER ELEVATIONS.
2. DRILLED PIERS AND CAPS ARE CENTERED ON COLUMN CENTERLINES UNLESS NOTED OTHERWISE.

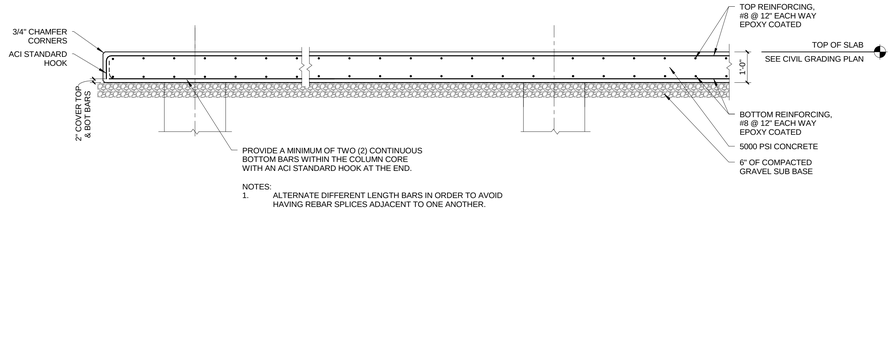
5 TYPICAL DRILLED PIER
1/2" = 1'-0"



3 BOLLARD ON STRUCTURAL SLAB
1 1/2" = 1'-0"

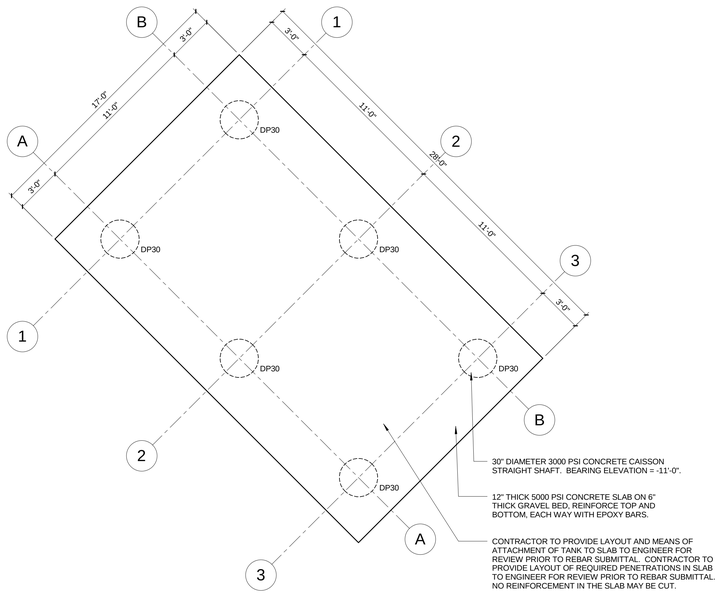


2 TYPICAL CONCRETE SLAB OPENING
1/2" = 1'-0"



NOTES:
1. ALTERNATE DIFFERENT LENGTH BARS IN ORDER TO AVOID HAVING REBAR SPLICES ADJACENT TO ONE ANOTHER.

4 CONCRETE STRUCTURAL SLAB DETAIL
1/2" = 1'-0"



1 CONCRETE SLAB PLAN
1/4" = 1'-0"

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ED Director:
Infection Control:

Drawing Title: **STRUCTURAL PLAN AND DETAILS**

Approved: Chief of Engineering — Date
Approved: Director — Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 –SITE PLAN
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Drawn: BF
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Project No.: VA 701-13-R-0103
DRAWING NO.: **SS 0.01**

DEPARTMENT OF VETERANS AFFAIRS

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT (VALVE)	FOS	FUEL OIL SUPPLY	RL	REFRIGERANT LIQUID
AC	AIR CONDITIONING UNIT OR AIR COMPRESSOR	FOV	FUEL OIL VENT	RM	ROOM OR REFRIGERATION MACHINE
ACH	AIR CHANGES PER HOUR	FP	FIRE PROTECTION	RO	RELIEF OPENING
AF	AIR FILTER	FPB	FAN POWERED TERMINAL UNIT	RP	RADIANT PANEL
AFF	ABOVE FINISHED FLOOR	FPM	FEET PER MINUTE	RPM	REVOLUTIONS PER MINUTE
AHU	AIR HANDLING UNIT	FPS	FEET PER SECOND	RS	REFRIGERANT SUCTION
ALUM	ALUMINUM	FSD	FIRE/SMOKE DAMPER	RTT	ROOM TEMPERATURE TRANSMITTER
AMP	AMPERE	FT	FEET OR FLASH TANK	RV	REFRIGERANT VENT, RELIEF VALVE (VENT) OR ROOF VENTILATOR
AMS	AIR FLOW MEASURING STATION	FTR	FIN TUBE RADIATION (HOT WATER)	SA	SUPPLY AIR OR SOUND ATTENUATOR
AP	ACCESS PANEL	FV	FACE VELOCITY	SAD	SUPPLY AIR DUCT
APD	AIR PRESSURE DROP	G	NATURAL GAS	SCU	SELF CONTAINED AC UNIT
APPROX	APPROXIMATE	GA	GAUGE	SD	SMOKE DAMPER OR SMOKE DETECTOR
ARCH	ARCHITECT/ARCHITECTURAL	GAL	GALLON	SF	SUPPLY FAN OR SQUARE FEET
AS	AIR SEPARATOR	GC	GENERAL CONTRACTOR	SHT	SHEET
ASC	ABOVE SUSPENDED CEILING	GD	GRAVITY DAMPER	SL	SENSIBLE LOAD
AUTO	AUTOMATIC	GEN	GENERAL	SOL	SOLENOID
AVG	AVERAGE	GPH	GALLONS PER HOUR	SP	STATIC PRESSURE
BAS	BUILDING AUTOMATION SYSTEM	GPM	GALLONS PER MINUTE	SPECS	SPECIFICATIONS
BDD	BACK DRAFT DAMPER	GRL	GRILLE	SPS	STATIC PRESSURE SENSOR
BHP	BRAKE HORSEPOWER	GV	GRAVITY VENTILATOR OR NATURAL GAS VENT	SQ	SQUARE FEET
BOD	BOTTOM OF DUCT	H	HUMIDISTAT OR HUMIDIFIER	SS	STAINLESS STEEL
BOP	BOTTOM OF PIPE	HC	HEATING COIL	ST	STEAM TRAP
BR	BRINE RETURN	HD	HOOD OR HEAT DETECTOR OR HOT DECK	STD	STANDARD
BRF	BELOW RAISED FLOOR	HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER	STL	STEEL
BS	BRINE SUPPLY	HL	HIGH LIMIT	STM	STEAM
BSMT	BASEMENT	HORIZ	HORIZONTAL	STRUC	STRUCTURE/STRUCTURAL
BTUH	BRITISH THERMAL UNIT PER HOUR	HP	HORSEPOWER OR HEAT PUMP	T	THERMOSTAT OR STEAM TRAP ASSEMBLY
CA	COMPRESSED AIR	HPC	HIGH PRESSURE CONDENSATE RETURN	TB	TRANSFER BOOT (DUCT)
CAP	CAPACITY	HPS	HIGH PRESSURE STEAM	TCW	TREATED COLD WATER
CAV	CONSTANT AIR VOLUME TERMINAL UNIT	HR	HOUR	TD	TEMPERATURE DIFFERENCE
CC	COOLING COIL	HRP	HYDRONIC RADIANT PANEL	TEF	TOILET EXHAUST FAN
CCW	COUNTER CLOCKWISE	HT	HUMIDITY TRANSMITTER	TEMP	TEMPERATURE
CD	CONDENSATE DRAIN OR COLD DECK	HTG	HEATING	THK	THICK
CEIL	CEILING	HUM	HUMIDIFIER	TL	TOTAL LOAD
CF	CUBIC FEET	HVAC	HEATING, VENTILATION & AIR CONDITIONING	TO	TRANSFER OPENING
CFH	CUBIC FEET PER HOUR	HVU	HEATING & VENTILATING UNIT	TR	TEMPERATURE RISE
CFM	CUBIC FEET PER MINUTE	HWR	HEATING WATER RETURN	TS	TEMPERATURE SENSOR
CH	CHILLER	HWS	HEATING WATER SUPPLY	TSR	TOTAL STATIC PRESSURE
CHWR	CHILLED WATER RETURN	HX	HEAT EXCHANGER	TT	TEMPERATURE TRANSMITTER
CHWS	CHILLED WATER SUPPLY	HZ	HERTZ	TYP	TYPICAL
CL	CENTER LINE	ID	INSIDE DIAMETER	UC	UNDER-CUT (DOOR)
CLG	COOLING	IN OR "	INCH	UGRD	UNDERGROUND
CO	CLEAN OUT	IN W.C.	INCHES WATER COLUMN	UH	UNIT HEATER (HYDRONIC OR STEAM)
CONC	CONCRETE	IN W.G.	INCHES WATER GAUGE	UP	DUCT OFF-SET UP (IN DIRECTION OF FLOW)
CONN	CONNECTION	INSUL.	INSULATION	V	VOLT OR VENT
CONT	CONTINUOUS, CONTINUATION	KW	KILOWATT	VAV	VARIABLE AIR VOLUME
CP	CONTROL PANEL	KWH	KILOWATT HOUR	VD	VOLUME DAMPER
CT	COOLING TOWER	LAT	LEAVING AIR TEMPERATURE	VEL	VELOCITY
CU	CONDENSING/ER UNIT	LBS	POUNDS	VERT	VERTICAL
CU FT	CUBIC FEET	LDB	LEAVING DRY BULB TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
CUH	CABINET UNIT HEATER	LIN	LINEAR	VI	VIBRATION ISOLATION
CV	CONSTANT AIR VOLUME	LL	LOW LIMIT OR LANDLORD	VOL	VOLUME
CW	COLD WATER OR CLOCKWISE	LPC	LOW PRESSURE CONDENSATE RETURN	VSD	VARIABLE SPEED DRIVE
CWR	CONDENSER WATER RETURN	LPS	LOW PRESSURE STEAM	VTR	VENT THROUGH ROOF
CWS	CONDENSER WATER SUPPLY	LRA	LOCKED ROTOR AMPERES	W	WATT
D	DRAIN OR DRYER	LVG	LEAVING	W/	WITH
DB	DECIBEL OR DRY BULB TEMPERATURE	LWB	LEAVING WET BULB TEMPERATURE	WB	WET BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL	LWT	LEAVING WATER TEMPERATURE	WC	WATER COLUMN
DEG.F	DEGREE FAHRENHEIT	M	MOTORIZED DAMPER	WFD	WATER PRESSURE DROP
DF	DOOR (AIR CURTAIN) FAN	MAINT	MAINTENANCE	WFM	WATER FLOW MEASURING DEVICE
DG	DOOR GRILLE	MAX	MAXIMUM	WMS	WIRE MESH SCREEN
DH	DUCT HEATER	MBH	THOUSAND BTU PER HOUR	WT	WEIGHT
DIA	DIAMETER	MD	MANUAL DAMPER		
DIFF	DIFFUSER	MECH	MECHANICAL		
DIM	DIMENSION	MIN	MINIMUM OR MINUTE(S)		
DISCH	DISCHARGE	MISC	MISCELLANEOUS		
DP	DIFFERENTIAL PRESSURE	MO	MOTOR OPERATED DAMPER		
DWG	DRAWING	MPC	MEDIUM PRESSURE CONDENSATE RETURN		
DX	DIRECT EXPANSION	MPS	MEDIUM PRESSURE STEAM		
E	EXHAUST	NC	NORMALLY CLOSED OR NOISE CRITERIA		
E/RF	EXHAUST/RETURN FAN	NIC	NOT IN CONTRACT		
EA	EACH	NK	NECK		
EAD	EXHAUST AIR DUCT	NO OR #	NORMALLY OPEN OR NUMBER		
EAT	ENTERING AIR TEMPERATURE	NR	NOT REQUIRED		
EBB	ELECTRIC BASEBOARD HEATER	NTS	NOT TO SCALE		
EC	ELECTRICAL CONTRACTOR	NV	NATURAL VENTILATION		
EDB	ENTERING DRY BULB TEMPERATURE	OA	OUTSIDE AIR		
EER	ENERGY EFFICIENCY RATIO	OAD	OUTSIDE AIR DUCT		
EF	EXHAUST FAN	OAI	OUTSIDE AIR INTAKE		
EFF	EFFICIENCY	OBD	OPPOSED BLADE DAMPER		
EGW	ETHYLENE GLYCOL-WATER SOLUTION (% GLYCOL BY VOLUME)	OD	OUTSIDE DIAMETER		
EHC	ELECTRIC HEATING COIL	OPNG	OPENING		
EJ	EXPANSION JOINT	OSA	OUTSIDE AIR DUCT		
EL/ELEV	ELEVATION	OV	OVAL DUCT DIMENSIONS (SIZE IN INCHES. FIRST DIMENSION IS SHOWN)		
ELEC	ELECTRIC/ELECTRICAL	P	PUMP		
ELEM	ELEMENT	PA	PASCAL		
EMD	END OF MAIN DRIP (STEAM)	PC	PLUMBING CONTRACTOR		
ENT	ENTERING	PCD	PUMPED CONDENSATE DISCHARGE		
EPS	ELECTRIC PRESSURE SWITCH	PCR	PUMPED CONDENSATE DISCHARGE		
EQUIP/EQPT	EQUIPMENT	PE	PRESSURE-ELECTRIC SWITCH		
ERP	ELECTRIC RADIANT PANEL	PGW	PROPYLENE GLYCOL-WATER SOLUTION (%GLYCOL BY VOLUME)		
ESP	EXTERNAL STATIC PRESSURE	PH	PHASE		
ET	EXPANSION TANK	PLBG	PLUMBING		
EUH	ELECTRIC UNIT HEATER	PP	PILOT POSITIONER		
EWB	ENTERING WET BULB TEMPERATURE	PRESS	PRESSURE		
EWT	ENTERING WATER TEMPERATURE	PRV	PRESSURE REDUCING VALVE		
EXH	EXHAUST	PSIA	POUNDS PER SQUARE INCH ABSOLUTE		
EXIST	EXISTING	PSIG	POUNDS PER SQUARE INCH GAUGE		
F	FILTER	R	RETURN		
F&T	FLOAT & THERMOSTATIC STEAM TRAP	RA	RETURN AIR		
FA	FREE AREA	RAD	RETURN AIR DUCT		
FC	FAN COIL	RC	REHEAT COIL		
FD	FIRE DAMPER	REG	REGISTER		
FH	FUME HOOD	REQ'D	REQUIRED		
FL	FLOOR	RF	RETURN FAN		
FLA	FILL LOAD AMPERES	RH	RELATIVE HUMIDITY		
FLEX	FLEXIBLE	RHG	REFRIGERANT HOT GAS		
FOG	FUEL OIL GAUGE	RHWR	REHEAT HOT WATER HEATING RETURN		
FOR	FUEL OIL RETURN	RHWS	REHEAT HOT WATER HEATING SUPPLY		

PIPING SYMBOLS

- NEW PIPE
- EXISTING PIPE OR ITEM TO BE REMOVED
- EXISTING PIPE OR ITEM TO REMAIN
- BR — BRINE RETURN
- BS — BRINE SUPPLY
- CA — COMPRESSED AIR
- CD — CONDENSATE DRAIN
- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- D — DRAIN
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUPPLY
- FOV — FUEL OIL VENT
- G — NATURAL GAS
- GV — NATURAL GAS VENT
- HPC — HIGH PRESSURE CONDENSATE RETURN
- HPS — HIGH PRESSURE STEAM
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- LPC — LOW PRESSURE CONDENSATE RETURN
- LPS — LOW PRESSURE STEAM
- MPC — MEDIUM PRESSURE CONDENSATE RETURN
- MPS — MEDIUM PRESSURE STEAM
- PCR — PUMPED CONDESNATE DISCHARGE
- RHG — REFRIGERANT HOT GAS
- RHWR — REHEAT HOT WATER HEATING RETURN
- RHWS — REHEAT HOT WATER HEATING SUPPLY
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- RV — REFRIGERANT VENT
- V — VENT
- AIR SEPARATOR
- DIRECTION OF FLOW ARROW
- TEE TURNED DOWN
- ELBOW TURNED UP
- ELBOW TURNED DOWN
- SIGHT GLASS
- FLANGE
- CAPPED END CONNECTION
- EXPANSION JOINT
- FLEXIBLE CONNECTION
- FLOW METER (M)
- EXPANSION COMPENSATOR
- AUTOMATIC FLOW CONTROL DEVICE
- BALL VALVE
- BALANCING AND SHUT-OFF VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- BACKFLOW PREVENTER
- HOSE END DRAIN VALVE
- TRIPLE DUTY CHECK VALVE
- GATE VALVE
- GLOBE VALVE
- MANUAL AIR VENT
- MOTORIZED 2-WAY OR 3-WAY CONTROL VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- GAS COCK
- PIPE UNION
- SAFETY VALVE
- VACUUM BREAKER
- PUMP
- PRESSURE GAUGE WITH COCK
- THERMOMETER
- FLOW SWITCH (FS)
- PIPE ANCHOR
- PIPE GUIDE
- STEAM TRAP ASSEMBLY
- Y-TYPE STRAINER
- Y-TYPE STRAINER WITH HOSE
- BASKET STRAINER
- FILTER/ DRYER
- PLUG VALVE

IDENTIFICATION SYMBOLS

- X — KEYED NOTE TAG
- OOO / X — NEW EQUIPMENT TAG
- EQUIPMENT TAG NO.
- (E)XXX — EXISTING EQUIPMENT TAG
- EXISTING
- SECTION NUMBER
- DRAWING ON WHICH SECTION IS SHOWN
- DETAIL NUMBER
- DRAWING ON WHICH DETAIL IS LOCATED
- POINT OF NEW CONNECTION BETWEEN EXISTING & NEW WORK
- AREA MATCHLINE

GENERAL NOTES

A. THIS IS A GENERAL LIST OF ABBREVIATIONS AND SYMBOLS ON THIS SHEET. SOME ABBREVIATIONS AND SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT.
B. DO NOT INSTALL ANY NEW WORK DIRECTLY ABOVE ANY ELECTRICAL PANELS AND TRANSFORMERS.

BASIS OF DESIGN

BASIS OF DESIGN		
PRODUCT	MANUFACTURER	MODEL
DISPENSER	WAYNE	EG6201/2GJK
E-85 PIPING	OPW	–
CONTAINMENT PIPING	OPW	–
DISPENSER SUMP	FRANKLIN SUELING SYSTEMS	LMM 2715
TANK FILLING STATION	SIMPLEX	SMART PUMP
E-85 TANK # 1	ACE TANK	FIREGUARD 2500 GALLON
E-85 TANK # 2	ACE TANK	FIREGUARD 2500 GALLON
E-85 PUMP SUBMERSIBLE PUMP	FRANKLIN SUELING SYSTEMS	STPAG 150 SERIES
SUBMERSIBLE PUMP CONTROLLER	FRANKLIN SUELING SYSTEMS	STP-SCI
EMERGENCY SHUTOFF VALVE	FRANKLIN SUELING SYSTEMS	662 SERIES
TANK FLOAT SWITCH	SIMPLEX	SP-3VG
TRANSITION SUMP	FRANKLIN SUELING SYSTEMS	AST-2922

Revisions	Date
9	
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1 ISSUED FOR BID	1.31.14

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Approved:
Chief, FMS:
Chief of Projects:
Chief of Safety:
Chief of Staff:
ED Director:
Infection Control:

Drawing Title: MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS
Project Title: E-85 FUEL STATION BUILDING 20 — EDWARD HINES, JR. VA HOSPITAL
Date: 01/31/14
Project No.: VA 701-13-R-0103
Approved: Chief of Engineering — Date
Approved: Director — Date
Building Number & Floor: BUILDING 20 -SITE PLAN
Checked: BT
Drawn: TFM
Location: 2100 S 5th Ave #111L Hines, IL 60141
DRAWING NO.: MO.01

DEPARTMENT OF VETERANS AFFAIRS

PIPING SYMBOLS

- NEW PIPING
- RISER DOWN (ELBOW)
- RISER UP (ELBOW)
- SOLENOID VALVE

ABBREVIATIONS

DWG	DRAWING
PRV	PRESSURE REDUCING VALVE
TYP	TYPICAL

IDENTIFICATION SYMBOLS

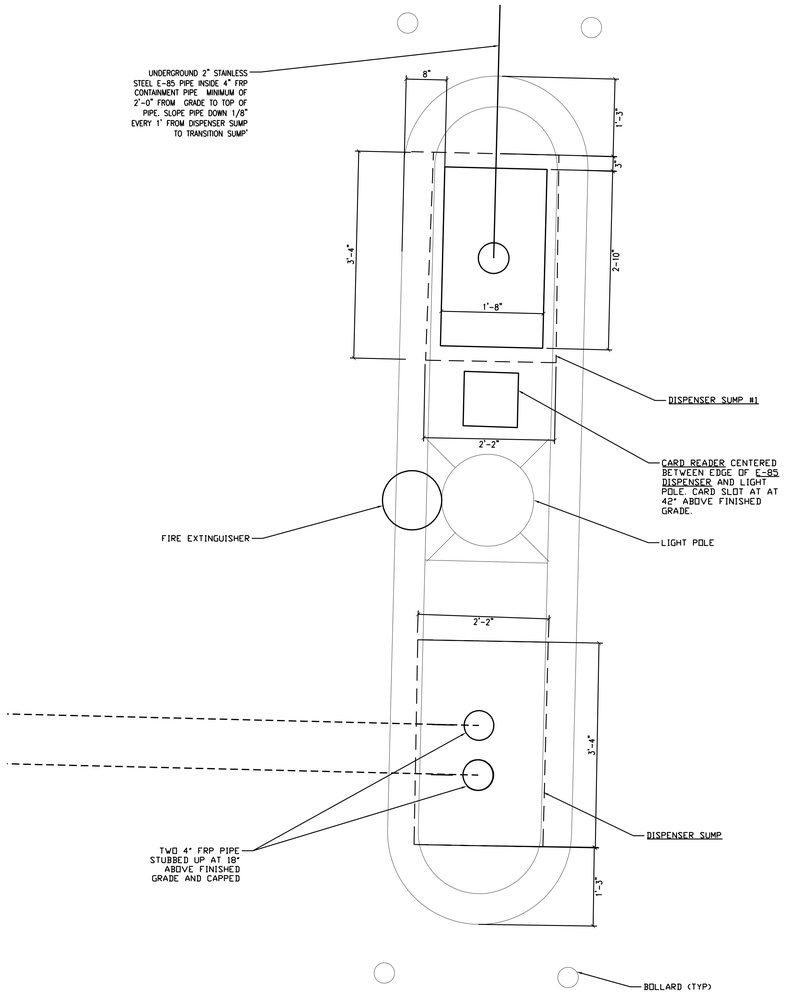
000 / 000 — DETAIL NUMBER / DRAWING ON WHICH DETAIL IS LOCATED

FIRE EXTINGUISHER SCHEDULE

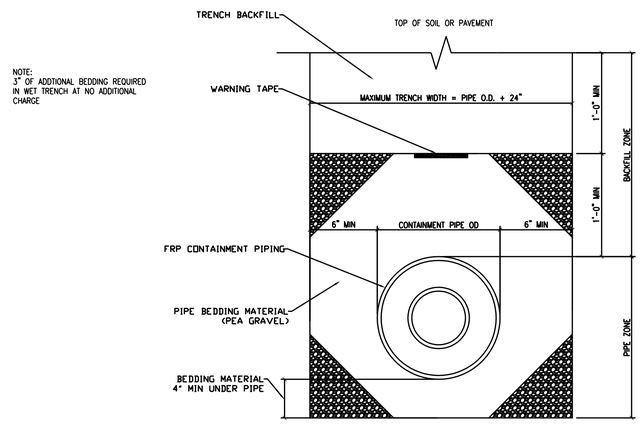
TAG	MANUFACTURE MODEL NO.	CAPACITY	UL RATING	REMARKS
FE-1	LARSEN PRODUCTS MODEL MP10	10 LBS MULTI-PURPOSE DRY CHEMICAL	4A-80B:C	CABINET TYPE FIRE EXTINGUISHER

FIRE EXTINGUISHER CABINET SCHEDULE

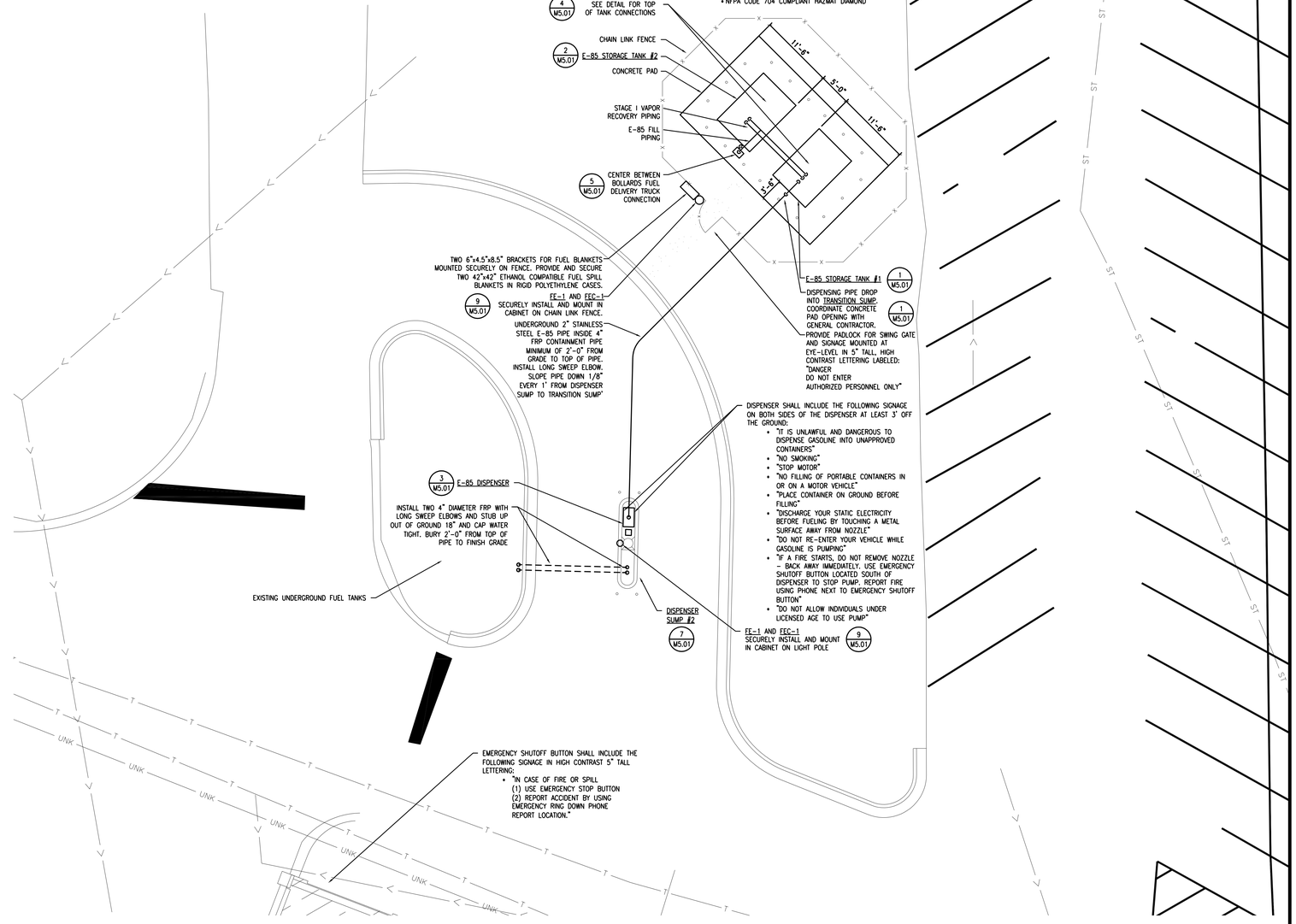
TAG	MANUFACTURE MODEL NO.	SERIES	PROJECTION	FINISH	DOOR STYLE	FE TYPE	LETTERING
FEC-1	LARSEN PRODUCTS MODEL 2409-SM	ARCHITECTURAL SERIES	SURFACE MOUNTED	STANDARD OUTDOOR	SOLID	FE-1	DECAL LETTERED: "FIRE EXTINGUISHER"



3 DISPENSER ISLAND ENLARGED PLAN
1"-1'-0"



2 PIPE TRENCH DETAIL
N.T.S.



1 MECHANICAL SITE PLAN
1/8"-1'0"

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1	ISSUED FOR BID	1.31.14
Revisions		Date

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Approved:
Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: MECHANICAL SITE PLAN

Approved: Chief of Engineering — Date

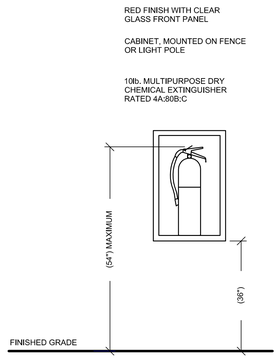
Approved: Director — Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 -SITE PLAN
Checked: BT
Drawn: TFM
Location: 2100 S 5th Ave #111L Hines, IL 60141

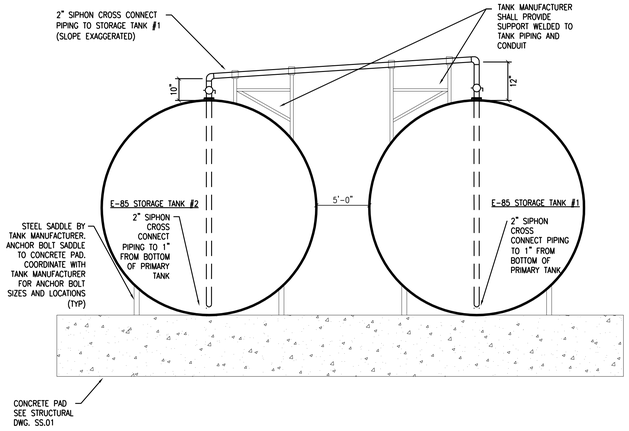
Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: M0.51

DEPARTMENT OF VETERANS AFFAIRS

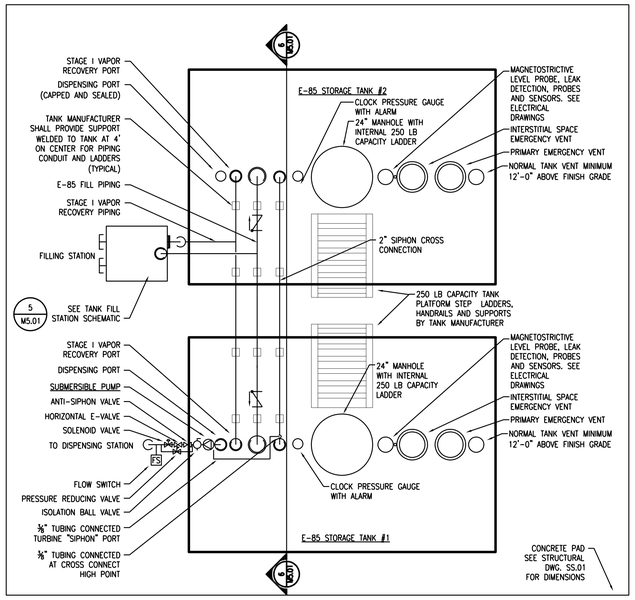


9 FIRE EXTINGUISHER DETAIL
NOT TO SCALE

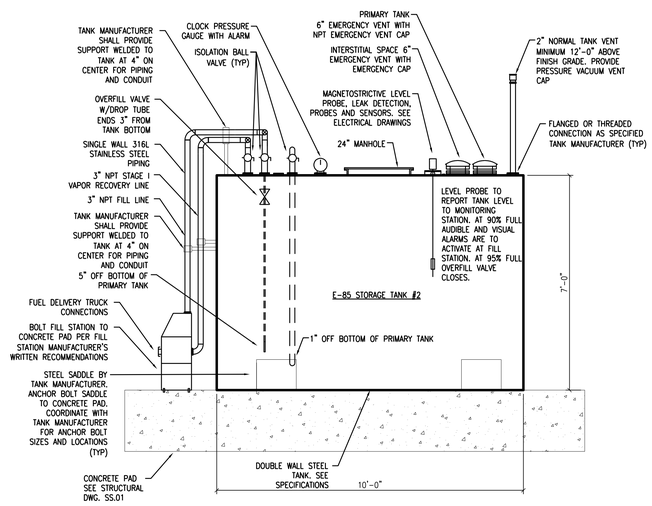
SIPHON MANIFOLD BASIS OF OPERATION:
SUBMERSIBLE TURBINE PUMP INCLUDES SIPHON JET. WHEN PUMP IS RUNNING, PRODUCT IS SENT THROUGH SIPHON JET THAT
(1) ENSURES PUMP IS MOVING ENOUGH FLUID TO PROVIDE SUFFICIENT COOLING WHEN PUMP DEADHEADS
(2) GENERATE VACUUM AT DISCHARGE HEAD SIPHON PORT.
THE VACUUM FROM SIPHON JET PULLS AIR FROM CROSS CONNECT PIPING TO FILL WITH PRODUCT. WHEN CROSS CONNECT PIPING IS FULL OF PRODUCT, TANK LEVELS WILL EQUALIZE.



6 CROSS CONNECTION SCHEMATIC
NOT TO SCALE

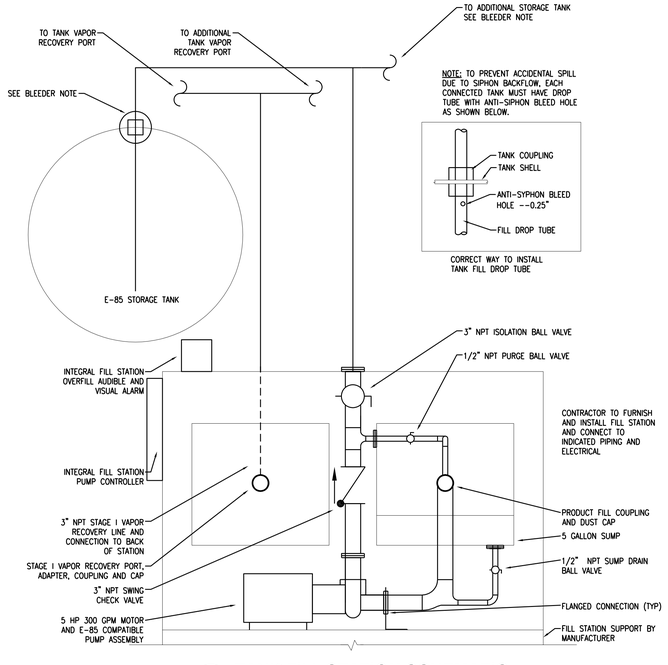


4 TOP OF TANK CONNECTION SCHEMATIC
NOT TO SCALE



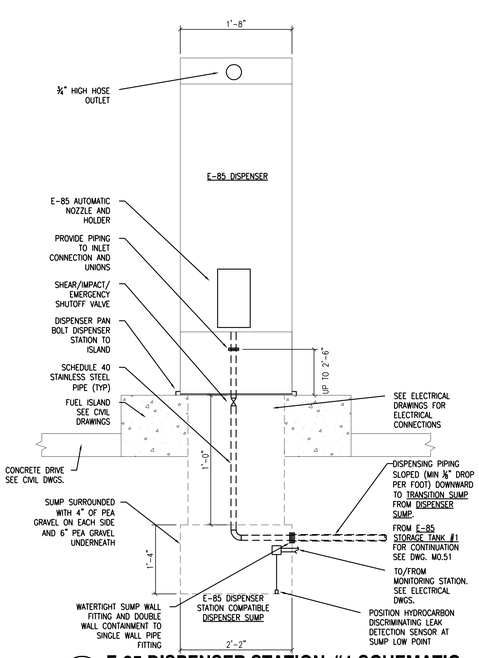
2 STORAGE TANK #2 SCHEMATIC
NOT TO SCALE

8 INTERSTITIAL MONITORING SCHEMATIC
NOT TO SCALE

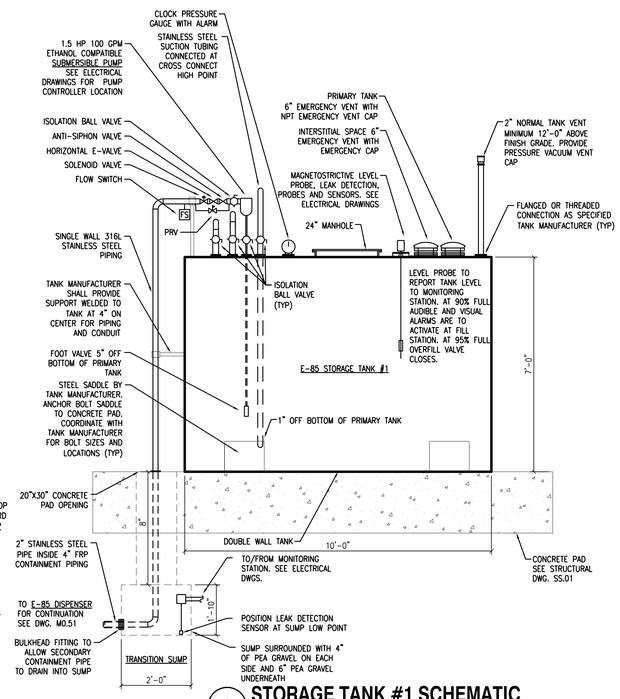


5 TANK FILL STATION SCHEMATIC
NOT TO SCALE

7 DISPENSER SUMP #2 SCHEMATIC
NOT TO SCALE



3 E-85 DISPENSER STATION #1 SCHEMATIC
NOT TO SCALE



1 STORAGE TANK #1 SCHEMATIC
NOT TO SCALE

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1	ISSUED FOR BID	1.31.14
Revisions		Date

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Chief of Safety:
Chief of Staff:
ED Director:
Infection Control:

Drawing Title: MECHANICAL DETAILS

Approved: Chief of Engineering — Date

Approved: Director — Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 -SITE PLAN
Checked: BT
Drawn: TFM

Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14

Project No.: VA 701-13-R-0103

DRAWING NO.: M5.01

DEPARTMENT OF VETERANS AFFAIRS

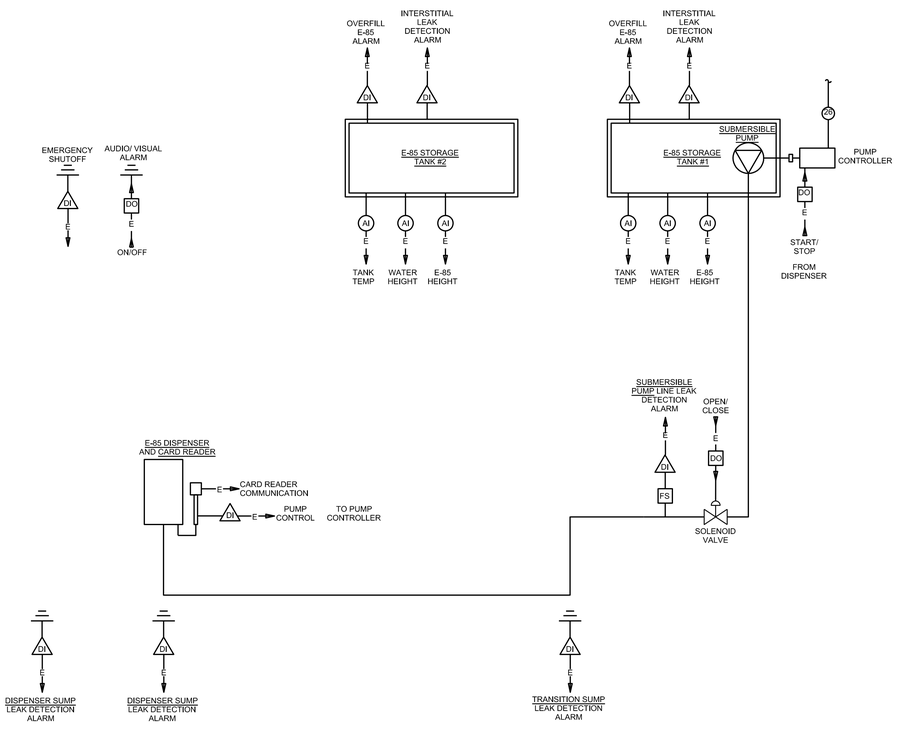
E-85 FUEL STATION – POINT LIST SUMMARY

	INPUTS: DIGITAL								OUTPUTS: ANALOG		OUTPUTS: DIGITAL				SYSTEM FEATURES: ALARMS			
	PROBE TEMPERATURE SENSOR	PRESSURE	OTHER	DIFFERENTIAL PRESSURE SWITCH	FLOW SWITCH	CURRENT SWITCH	STATUS	ALARM	OVERRIDE	OTHER	MODULATING	VARIABLE SPEED	OTHER	ENABLE/DISABLE	START/STOP	OPEN/CLOSE	ON/OFF	OTHER	HIGH ANALOG	LOW ANALOG	OFF NORMAL	AUTO ALARM SEQUENCE	NOTES
SPILL PREVENTION																							
E-85 STORAGE TANK #1 E-85 HEIGHT			X																X	X			1
E-85 STORAGE TANK #1 WATER HEIGHT			X																X				1
E-85 STORAGE TANK #1 TEMPERATURE	X																		X	X			1
E-85 STORAGE TANK #1 OVERFILL E-85 ALARM								X															1
E-85 STORAGE TANK #2 E-85 HEIGHT			X																X	X			1
E-85 STORAGE TANK #2 WATER HEIGHT			X																X				1
E-85 STORAGE TANK #2 TEMPERATURE	X																		X	X			1
E-85 STORAGE TANK #2 OVERFILL E-85 ALARM								X															1
EMERGENCY SHUTOFF ALARM									X														1
SOLENOID VALVE POSITION																X							1
LEAK DETECTION																							
E-85 STORAGE TANK #1 AUTOMATED LEAK DETECTION ALARM								X															1
E-85 STORAGE TANK #1 INTERSTITIAL LEAK DETECTION ALARM								X															1
E-85 STORAGE TANK #2 AUTOMATED LEAK DETECTION ALARM								X															1
E-85 STORAGE TANK #2 INTERSTITIAL LEAK DETECTION ALARM								X															1
TRANSITION SUMP LEAK DETECTION ALARM								X															1
DISPENSER SUMP LEAK DETECTION ALARM (X2)								X															1
FILL STATION SUMP LEAK DETECTION ALARM								X															1
SUBMERSIBLE PUMP LINE LEAK DETECTOR								X															1
DISPENSER																							
VEHICLE IDENTIFICATION			X																				2
ACTUAL FUEL CONSUMPTION			X																				2
ODOMETER READING			X																				2
DATE OF FUELING			X																				2
GALLONS DISPENSED			X																				2

NOTES:
1. POINT TO BE MONITORED AT ALARM SYSTEM MONITORING STATION
2. INFORMATION TO BE AUTOMATICALLY LOGGED FOR VA REVIEW AND REPORTED FROM CARD READER OR DISPENSER

SEQUENCE OF OPERATION

1. FILL /FUEL DELIVERY OPERATION:
   a. FILL STATION PUMP SHALL BE ENERGIZED AND DENERGIZED AT FILL STATION CONTROL PANEL BY PUMP CONTROLLER.
   b. INTEGRAL FILL STATION SUMP SHALL CAPTURE ANY LEAKAGE FROM FILL PIPING AND DRAIN BACK INTO FILL PIPING.
   c. PERIODIC VISUAL INSPECTION FOR LEAKAGE OF FILL LINE BETWEEN REMOTE STATION AND TANK SHALL OCCUR.
   d. AT 90% OF TANK CAPACITY OVERFILL VALVE SHALL RESTRICT FILL FLOW AND TRIGGER INTEGRAL AUDIO/VISUAL ALARM ON FILL STATION.
   e. AT 95% TANK CAPACITY OVERFILL PRODUCT ALARM SHALL SHUTOFF FILL STATION PUMP OVERFILL PRODUCT ALARM SHALL OVERRIDE FILL STATION CONTROL PANEL.
   f. OVERFILL VALVE SHALL CLOSE UPON 98% FILL CAPACITY AND TRIGGER AUDIBLE/VISUAL ALARM, ALARM TO ALARM SYSTEM AND ALARM TO SECURITY STATION AND AND TRIGGER EMERGENCY SHUTOFF ALARM TO SHUTOFF E-85 DISPENSER AND SUBMERSIBLE PUMP.
2. TANK OPERATION:
   a. AUTOMATED LEAK DETECTION ALARM SHALL TRIGGER AUDIBLE/VISUAL ALARM, ALARM TO ALARM SYSTEM, ALARM TO SECURITY STATION AND TRIGGER EMERGENCY SHUTOFF ALARM TO SHUTOFF E-85 DISPENSER AND SUBMERSIBLE PUMP UPON THE FOLLOWING CONDITIONS:
      - VOLUME OF TANK + VOLUME OF PRODUCT DISPENSED IS LESS THAN THE VOLUME OF PRODUCT FILLED
      - SUDDEN DROP OF TANK VOLUME
   b. UPON DETECTION OF E-85, INTERSTITIAL LEAK DETECTION ALARM SHALL TRIGGER AUDIBLE AND VISUAL ALARM, ALARM TO ALARM SYSTEM AND ALARM TO SECURITY STATION AND TRIGGER EMERGENCY SHUTOFF ALARM TO SHUTOFF E-85 DISPENSER AND SUBMERSIBLE PUMP.
   c. PERIODIC VISUAL INSPECTION FOR LEAKAGE OF TANK AND CONNECTED PIPING.
   d. WATER HEIGHT, HIGH WATER ALARM, E-85 HEIGHT, TEMPERATURE AND LOW E-85 ALARM SHALL BE REPORTED TO ALARM SYSTEM FOR MONITORING PURPOSES.
   e. IF MONITORING SYSTEM OR ALARM IS INOPERABLE, TANK VOLUME SHALL BE MONITORED MANUALLY.
3. DISPENSING OPERATION:
   a. PUMP CONTROLLER SHALL ENERGIZE SUBMERSIBLE PUMP UPON CALL FOR E-85 FROM CARD READER. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR CARD READER SYSTEM OPERATION. PUMP CONTROLLER SHALL DEENERGIZE SUBMERSIBLE PUMP UPON CALL FOR SHUTOFF FROM E-85 DISPENSER OR CARD READER.
   b. EMERGENCY SHUTOFF ALARM SHALL TRIGGER AUDIBLE/VISUAL ALARM, ALARM TO ALARM SYSTEM AND ALARM TO SECURITY STATION, SHUTOFF E-85 DISPENSER AND CLOSE SOLENOID VALVE IN SEQUENCE. SHUTOFF OF POWER TO E-85 DISPENSER SHALL SHUTOFF SUMMERSIBLE PUMP.
   c. ANTI SIPHON VALVE SHALL CLOSE UPON LOSS OF PRESSURE TO DISCHARGE LINE INDICATING A LEAK.
   d. UPON DETECTION OF E-85 FLOW OF AT LEAST 3 GALLONS PER HOUR AT 10 PSIG PRESSURE WHEN SUBMERSIBLE PUMP IS DEENGERGIZED, SUBMERSIBLE PUMP LINE LEAK DETECTOR SHALL RESTRICT AND CLOSE OFF FLOW FROM TANKS TO DISPENSER IN SEQUENCE AND TRIGGER AUDIBLE/VISUAL ALARM, ALARM TO ALARM SYSTEM AND ALARM TO SECURITY STATION. PUMP CONTROLLER SHALL SHUTOFF PUMP UPON MOTOR OR POWER FAULT.
   e. WHEN PUMP IS ENERGIZED, SUBMERSIBLE PUMP LINE LEAK DETECTOR SHALL BE MONITORED AT ALARM SYSTEM.
   f. LEAK FROM DISPENSING LINE SHALL DRAIN INTO TRANSITION SUMP. UPON DETECTION OF E-85 IN TRANSITION SUMP LEAK DETECTION ALARM SHALL TRIGGER AUDIBLE/VISUAL ALARM, ALARM TO ALARM SYSTEM AND ALARM TO SECURITY STATION, AND TRIGGER EMERGENCY SHUTOFF ALARM TO SHUTOFF E-85 DISPENSER AND SUBMERSIBLE PUMP.
   g. LEAK IN UNDERGROUND PRIMARY PIPING SHALL DRAIN INTO SECONDARY CONTAINMENT PIPING. SECONDARY CONTAINMENT PIPING SHALL DRAIN INTO TRANSITION SUMP.
   h. LEAK FROM DISPENSING STATION PIPING SHALL DRAIN INTO DISPENSER SUMP. EACH DISPENSER SUMP LEAK DETECTION ALARM SHALL TRIGGER AUDIBLE/VISUAL ALARM, ALARM TO ALARM SYSTEM AND ALARM TO SECURITY STATION, AND TRIGGER EMERGENCY SHUTOFF ALARM TO SHUTOFF DISPENSER AND SUBMERSIBLE PUMP UPON DETECTION OF E-85.
   i. E-85 DISPENSER STATION SHALL REPORT VEHICLE IDENTIFICATION, ACTUAL FUEL CONSUMPTION, ODOMETER READING, DATE OF FUELING AND GALLONS DISPENSED TO BE LOGGED.
   j. DISPENSER NOZZLE SHALL INCLUDE AUTOMATIC OVERFILL SHUTOFF.
   k. PIPING AND DISPENSER SHALL BE MANUALLY INSPECTED PERIODICALLY FOR LEAKS.



1 FUEL STATION SEQUENCE OF OPERATION
N.T.S.

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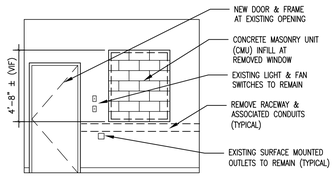
Chief of Safety:
Chief of Staff:
ED Director:
Infection Control:

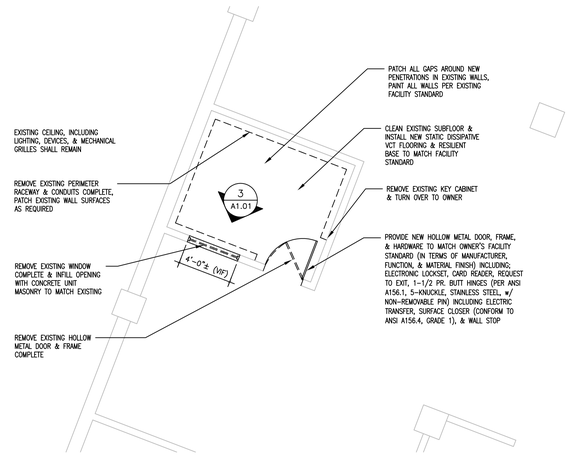
Drawing Title: MECHANICAL CONTROL DIAGRAMS
Approved: Chief of Engineering Date
Approved: Director Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL
Building Number & Floor: BUILDING 20 –SITE PLAN
Checked: BT
Drawn: TFM
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: M6.01

DEPARTMENT OF VETERANS AFFAIRS





3 ELEVATION - SOUTH WALL
SCALE: 1/4"-1'-0"

N 2 OVERALL FIRST FLOOR PLAN - BUILDING #20
SCALE: 1/32"-1'-0"

N 1 NEW TELECOMMUNICATION ROOM FLOOR PLAN
SCALE: 1/4"-1'-0"

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1	ISSUED FOR BID	1.31.14
Revisions		Date

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Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title
ARCHITECTURAL
FIRST FLOOR PLAN

Approved: Chief of Engineering Date

Approved: Director Date

Project Title
E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR.
VA HOSPITAL

Building Number & Floor
BUILDING 20 –SITE PLAN

Checked
MB/RR

Drawn
MB/RR

Location 2100 S 5th Ave #111L
Hines, IL 60141

Date
01/31/14

Project No.
VA 701-13-R-0103

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A1.01

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TELECOMMUNICATIONS SYMBOLS

- OUTLET, COMBINATION TELEPHONE/DATA COMMUNICATION
- OUTLET TELEPHONE
- OUTLET DATA ONLY
- OUTLET; LETTER INDICATES AS FOLLOWS:
  A = AUDIO V = VIDEO I = INTERCOM
- TELEPHONE TERMINAL CABINET
- TTB — TELEPHONE BACKBOARD (WALL MOUNTED)
- INTERCOM STATION (REFER TO SPECS. FOR FUNCTIONAL OPERATION OF INSTRUMENT & TYPE REQUIRED).
- INTERCOM STAFF STATION.
- TELECOMMUNICATION CABINET.

NOTE:
FOR WHEELCHAIR PATIENT USE MOUNT TELEPHONE OUTLET 36" [914mm] AFF TO BOTTOM OF OUTLET BOX.

DESK PHONES – MOUNT OUTLET 1'–6" [457mm] AFF

PAY PHONES – MOUNT OUTLET 4'–0" [1219mm] AFF

HEIGHT OF TELECART OUTLETS SHALL BE AS INDICATED ON BEDWALLS OR PBPU DETAILS.

SEE VA BARRIER FREE DESIGN GUIDE PG–18–13.

FIRE ALARM SYMBOLS

- FAC — ALARM, FIRE, COMMUNICATOR
- FACP — ALARM, FIRE, PANEL; LETTERS INDICATE AS FOLLOWS:
  FACC = CENTRAL CONSOLE FACP = CONTROL PANEL
  MFACP= MASTER CONTROL PANEL FAAP = ANNUNCIATOR PANEL
- BATT — ALARM, FIRE; LETTERS INDICATE AS FOLLOWS:
  BATT = BATTERIES CHR = CHARGER
- VSS — ALARM, FIRE, VALVE SUPERVISORY SWITCH.
- FATC — ALARM, FIRE, TERMINAL CABINET.
- ALARM, HORN/LIGHT, ONE ASSEMBLY
- C — ALARM, HORN/LIGHT, ONE ASSEMBLY WITH CHIME
- ALARM, LAMP LIGHT, SIGNAL LIGHT, STROBE
- S — ALARM, VOICE COMMUNICATION SPEAKER, CEILING MOUNTED
- ALARM, MANUAL CONTROL
- R/T, HD — DETECTOR, HEAT; LETTER INDICATES AS FOLLOWS:
  R/T = COMBINATION F = FIXED TEMPERATURE RISE
  R/C = RATE COMPENSATION R = RATE OF

POWER SYMBOLS

- T — TRANSFORMER, PLAN
- JUNCTION BOX
- C | C — WIRE BASKET TYPE
- PUSH BUTTON
- RELAY LIGHTING PANEL
- PANELBOARD CABINET, FLUSH MOUNTED
- PANELBOARD CABINET, SURFACE MOUNTED
- RECEPTACLE DUPLEX
- JUNCTION BOX
- RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER
- RECEPTACLE, QUADRAPLEX
- RECEPTACLE, SPECIAL PURPOSE
  REFER TO SPECIAL OUTLET SCHEDULE
- MOTOR
  REFER TO MOTOR WIRING SCHEDULE
- DISCONNECT SWITCH

LIGHTING SYMBOLS

- $2 — SWITCH
  BLANK = SINGLE POLE 2P = DOUBLE POLE
  3W = THREE–WAY 4W = FOUR–WAY
  D = DIMMER K = KEY OPERATED
  LV= LOW VOLTAGE L = LOCK
  LM= LOW VOLTAGE MASTER T = TIMER OPERATED
  WP= WEATHER PROOF Mo= OCCUPANCY SENSOR
  MC=MOMENTARY CONTACT
- LIGHT POLE, ONE LUMINAIRE
- LIGHT POLE, TWO LUMINAIRES

ABBREVIATIONS

1PH	SINGLE–PHASE
1P	SINGLE POLE
2/C	TWO–CONDUCTOR
3/C	THREE–CONDUCTOR
3PH	THREE–PHASE
4/C	FOUR–CONDUCTOR
4W	FOUR–WIRE
A/E	ARCHITECT/ENGINEER
AAP	ALARM ANNUNCIATOR PANEL
AC	ALTERNATING CURRENT OR ARMORED CABLE
ACC	ACCESSIBLE
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJOINING
AF	AMPERE FRAME OR AMP FUSE
AFC	ABOVE FINISHED COUNTER, AUTOMATIC FREQUENCY CONTROL, OR AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AH	AMPERE HOUR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
AMB	AMBIENT
AMP	AMPERE
ARCH	ARCHITECT
ASC	AMPS SHORT CIRCUIT
AT	AMPERE TRIP
AUTO	AUTOMATIC
AV	AUDIO VISUAL
BAT	BATTERY
BC	BARE COPPER
BD	BOARD
BFF	BELOW FINISH FLOOR
BIL	BASIC INSULATION LEVEL
BLDG	BUILDING
BRKR	BREAKER
BYP	BY PASS
C	CONDUIT
CAB	CABINET
CALC	CALCULATE
CAP	CAPACITY
CAT	CATALOG
CCR	CONTROL CONTACTOR
cd	CANDELA
CD	CONSTRUCTION DOCUMENTS
CF	CONTRACTOR FURNISHED
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/OWNER INSTALLED
CFE	CONTRACTOR FURNISHED EQUIPMENT
CKT	CIRCUIT
CKT BRKR	CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COAX	COAX CABLE
COMM	COMMUNICATION
COMPT	COMPARTMENT
CONC	CONCRETE
CONT	CONTINUE
CONTR	CONTRACTOR
COORD	COORDINATE
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
C	
CU	COPPER
CU FT	CUBIC FEET
CUR	CURRENT
DB	DIRECT BURIAL
DC	DIRECT CURRENT
DEG C	DEGREES CELSIUS
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DIAG	DIAGRAM
DISC	DISCONNECT
DISTR	DISTRIBUTION
DISTR PNL	DISTRIBUTION PANEL
DN	DOWN
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DRSW	DOOR SWITCH
DS	DISCONNECT SWITCH
DWG	DRAWING
EC	EMPTY CONDUIT
EG	EQUIPMENT GROUND
EL	ELEVATION
ELEC	ELECTRIC OR ELECTRICAL
EMER	EMERGENCY
EMI	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPRF	EXPLOSION PROOF
ESMT	EASEMENT
EXIST	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
fc	FOOTCANDLE
FI	FILM ILLUMINATOR
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE METALLIC CONDUIT
FP	FIRE PROTECTION
FT	FEET OR FOOT
FU SW	FUSED SWITCH
FVNR	FULL VOLTAGE NON–REVERSING
GND	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GTB	GROUND TERMINAL BOX

ABBREVIATIONS

HOA	HAND–OFF–AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HZ	HERTZ
IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
IMC	INTERMEDIATE METAL CONDUIT
J–BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAH	KILOVOLT AMPERE PER HOUR
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWH	KILOWATT HOUR
kWHM	KILOWATT HOUR METER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LM	LUMEN
LP	LIGHT POLE
LRA	LOCKED ROTOR AMPS
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MLO	MAIN LUGS ONLY
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MVA	MEGAVOLT–AMPERE
MW	MEGAWATT MICROWAVE
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT OR N	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NS	NO SCALE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVERLOAD
P	POLE
PB	PANELBOARD, PULL BOX, OR PUSHBUTTON
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PWR	POWER
REC	RECESSED
RECPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMS	ROOT MEAN SQUARE
REQD	REQUIRED
SCC	SHORT CIRCUIT CAPACITY
SF	SQUARE FOOT (FEET)
SHT	SHEET
SI	INTERNATIONAL SYSTEM OF UNITS
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD
TYP	TYPICAL
UGND	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	VOLT
VA	VOLT AMPERE
VAR	VOLT AMPERE REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
VOLT	VOLTAGE
W	WATT
WP	WEATHERPROOF

ONE-LINE DIAGRAM SYMBOLS

- PB — PULL BOX
- FUSE WITH RATING
- STARTER, COMBINATION WITH DISCONNECT SWITCH

SECURITY SYMBOLS

- M, T — ELECTRONIC LOCK; LETTER INDICATES AS FOLLOWS:
  M=MOUNT
  M–MULLION
  T=TECHNOLOGY/TYPE
  S–STRIKE
- M, T — BI–STATIC BEAM SENSOR; LETTER INDICATES AS FOLLOWS:
  M=MOUNT
  C–CEILING
  T=TECHNOLOGY/TYPE
  I–INFRARED
- M, PTZ — SECURITY ACCESS, VIDEO CAMERA WITH LENS
  M = MOTION DETECTOR
  PZ = MOTION DETECTOR WITH PAN AND ZOOM
  PTZ= MOTION DETECTOR WITH PAN, TILT, AND ZOOM
  FIXED = STATIONARY
- M — CARD READER; LETTER INDICATES AS FOLLOWS:
  M=MOUNT
  W–WALL 48" AFF
- M, T — PUSH BUTTON; LETTER INDICATES AS FOLLOWS:
  M=MOUNT
  W–WALL 48" AFF
  T=TECHNOLOGY/TYPE
  D–DURESS
- M — KEYPAD DEVICE; LETTER INDICATES AS FOLLOWS:
  M=MOUNT
  W–WALL

GENERAL NOTES

1. THIS SHEET OF SYMBOLS AND NOTES IS A STANDARD LIST. NOT ALL ITEMS ARE USED OR APPLY TO THIS PROJECT.

SHEET INDEX

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Chief of Safety:
Chief of Staff:
ED Director:
Infection Control:

Drawing Title: ELECTRICAL AND TELECOMMUNICATION SYMBOLS, ABBREVIATIONSAND NOTES
Project Title: E-85 FUEL STATION BUILDING 20 — EDWARD HINES, JR. VA HOSPITAL
Date: 01/31/14
Project No.: VA 701-13-R-0103
Approved: Chief of Engineering — Date
Approved: Director — Date
Building Number & Floor: BUILDING 20 –SITE PLAN
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DRAWING NO.: E0.01

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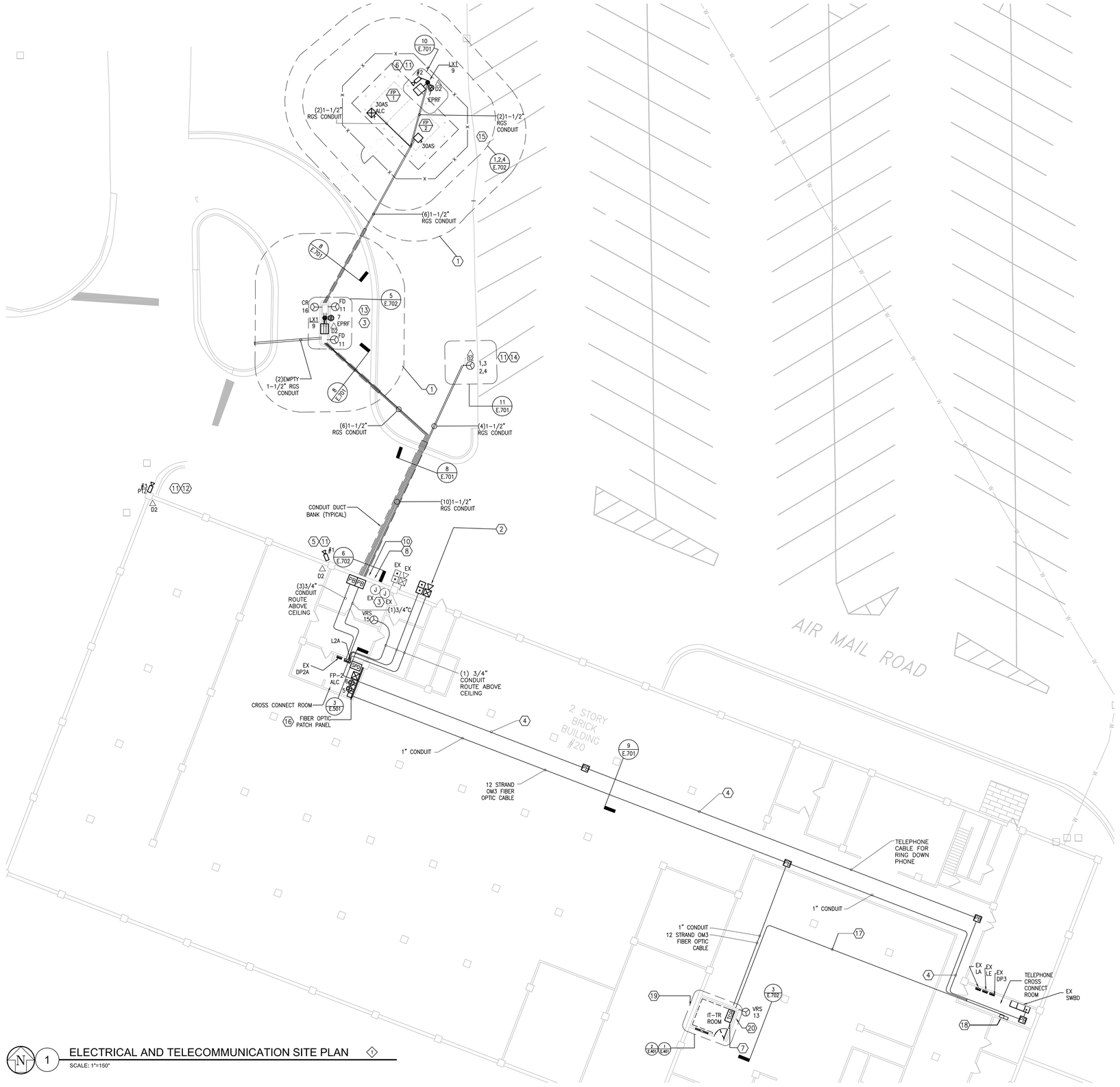

1 ELECTRICAL AND TELECOMMUNICATION SITE PLAN ◇1

SCALE: 1"=150"

GENERAL NOTES:

A.
(1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

GENERAL NOTES - DEMOLITION:

A.
EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON PLANS TO BE REMOVED COMPLETELY. CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA. DISCONNECT WIRING AT THE OVER CURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM THE ABANDONED CONDUITS.

B.
REMOVE ALL ACCESSIBLE ABANDONED WIRING OF ALL TYPES, OR CAP AND LABEL IN JUNCTION BOX FOR RE-USE, IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE.

C.
MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.

BRANCH CIRCUITING NOTES ◇

1.
WIRE ELECTRICAL OUTLETS, DEVICES, MOTORS, EQUIPMENT, LIGHT FIXTURES, AND OTHER BRANCH CIRCUITS TO PANEL AS INDICATED BELOW; UNLESS NOTED OTHERWISE.

208Y/120V PANELBOARDS
L2A = NORMAL POWER (N)

KEYED NOTES ⬡

1.
HAZARDOUS AREA. PROVIDE CLASS, 1 DIVISION 2, GROUP D INSTALLATION COMPLYING WITH NFPA 70 ARTICLE 514 FOR ALL EXTERIOR ELECTRICAL AND TELECOMMUNICATIONS CIRCUITS WHICH PASS THROUGH THIS AREA.

2.
PROVIDE EXPLOSION-PROOF EMERGENCY POWER OFF PUSHBUTTON, ALARM SILENCE PUSHBUTTON, HAZARD VISUAL AND AUDIO SIGNALING DEVICES. INTERFACE WITH FUEL DISPENSER PULSOR CONTROL AND FUEL MONITORING SYSTEM OUTPUT CONTACTS.

3.
PROVIDE COVERS FOR (2) OPEN JUNCTION BOXES SERVING EXISTING FUEL PUMP.

4.
PROVIDE 2" RGS CONDUIT. ROUTE IN OPEN CEILING JOIST CONSTRUCTION ABOVE. MAINTAIN HIGHEST POSSIBLE HEADROOM. 7'-0" MINIMUM.

5.
PROVIDE AND INSTALL ONE OUTDOOR RATED FIXED CAMERA IN AN OUTDOOR HOUSING MOUNTED 15 FT ABOVE GROUND ON THE SIDE OF THE BUILDING. CONDUIT FROM THE CAMERA SHALL ENTER THE BUILDING NEAR THE MOUNTING LOCATION AND ROUTED BACK TO THE WALL MOUNTED PATCH PANEL. ONE CATEGORY 6 CABLE SHALL BE HOME RUN FROM THE CAMERA TO THE WALL MOUNTED PATCH PANEL AND TERMINATED IN A COPPER CATEGORY 6 PATCH PANEL. THE CAMERA SHALL BE SET UP TO VIEW THE FUEL DISPENSER STATION.

6.
PROVIDE AND INSTALL ONE OUTDOOR RATED FIXED CAMERA IN AN OUTDOOR HOUSING MOUNTED 15 FT ABOVE GROUND ON THE LIGHT POLE. CONDUIT FROM THE CAMERA SHALL BE ROUTED BACK TO THE BUILDING AND TERMINATE IN THE WALL MOUNTED PATCH PANEL. THE CAMERA SHALL BE SET UP TO VIEW THE FUEL TANKS.

7.
PROVIDE TELECOM GROUND BAR. BOUND BACK TO MAIN ELECTRICAL GROUND BAR, AT SWITCHBOARD, WITH (1) #6 GREEN INSULATED WIRE IN 3/4" CONDUIT.

8.
CONTRACTOR SHALL INSTALL AN ANALOG RING DOWN WALL PHONE 48" AFF ON THE LEFT SIDE OF THE FUEL PUMP SHUT OFF. THE RING DOWN TELEPHONE IS FOR EMERGENCY NOTIFICATION TO THE SECURITY DESK CONTROL ROOM. INSTALL THE ANALOG WALL MOUNT TELEPHONE IN A WEATHERPROOF ENCLOSURE AND CROSS CONNECT TO SECURITY CONTROL ROOM. LABEL ENCLOSURE "EMERGENCY NOTIFICATION TELEPHONE".

9.
THE FUEL TRACKING AND MONITORING PANEL SHALL BE MOUNTED 48" AFF. THE MONITORING SYSTEM SHALL BE CONFIGURED AS WRITTEN IN THE SPECIFICATION. ONE ETHERNET CONNECTION (CATEGORY 6 CABLE) SHALL CONNECT THE MONITORING SYSTEM TO THE ETHERNET SWITCH IN THE IT - TR. COORDINATE EXACT MOUNTING LOCATION WITH EXISTING ELECTRICAL PANELS MOUNTED ON SAME WALL.

10.
THE EXISTING OUTDOOR ALARM SYSTEM (LIGHT, HORN, ACKNOWLEDGEMENT AND RESET BUTTONS) SHALL BE INCLUDED AND INCORPORATED INTO THE NEW FUEL TRACKING AND MONITORING SYSTEM. THE EXISTING VEEDER ROOT SYSTEM IS LOCATED JUST INSIDE OF THE BUILDING NEAR THE CONDUIT ENTRY POINT. THE CONTRACTOR SHALL INSTALL A CONNECTING COMMUNICATION CABLE FROM THE EXISTING VEEDER ROOT TO THE NEW FUEL TRACKING AND MONITORING SYSTEM IN ONE INCH CONDUIT. IF THE EXISTING VEEDER ROOT SYSTEM OR THE NEW FUEL TRACKING AND MENTORING SYSTEM SENSE AN ALARM THE EXISTING OUTDOOR ALARM WILL SOUND.

11.
CATEGORY 6 CABLES SHALL BE INSTALLED IN ONE INCH CONDUIT FROM THE CAMERAS, DESPENSING STATION AND AUTO CHARGING STATION TO THE WALL MOUNTED PATCH PANEL.

12.
PROVIDE AND INSTALL ONE PTZ CAMERA IN AN OUTDOOR HOUSING MOUNTED 15 FT ABOVE GROUND ON THE CORNER OF THE BUILDING. CONDUIT FROM THE CAMERA SHALL ENTER THE BUILDING NEAR THE MOUNTING LOCATION AND ROUTED BACK TO THE WALL MOUNTED PATCH PANEL. ONE CATEGORY 6 CABLE SHALL BE HOME RUN FROM THE CAMERA TO THE WALL MOUNTED CATEGORY 6 PATCH PANEL. THE CAMERA SHALL BE SET UP TO DEFAULT TO VIEW THE FUEL DISPENSER STATION.

13.
TWO CATEGORY 6 CABLES SHALL BE HOME RUN FROM THE WALL MOUNT PATCH PANEL TO THE FUEL FORCE CONTROLLER. THE CABLES SHALL BE TERMINATED, LABELED AND TESTED.

14.
ONE CATEGORY 6 CABLES SHALL BE HOME RUN FROM THE WALL MOUNT PATCH PANEL TO THE AUTOMOBILE CHARGING STATION. THE CABLE SHALL BE TERMINATED, LABELED AND TESTED.

15.
TWO CATEGORY 6 CABLES SHALL BE HOME RUN FROM THE WALL MOUNT PATCH PANEL TO THE JUNCTION BOX AT THE LIGHT POLE AND EXTENDED TO THE CAMERA. SENSOR AND ALARM CABLES SHALL BE HOME RUN FROM THE TRACKING AND MONITORING SYSTEM TO THE TWO TANKS AND DISPENSER.

16.
INSTALL A 12 PORT FIBER OPTIC PATCH PANEL AS DOWN ON DETAIL ELEVATION AND TERMINATE A 12 STRAND FIBER OPTIC CABLE IN THE PATCH PANEL ON SC CONNECTORS. EXTEND THE 12 STRAND OM3 FIBER OPTIC CABLE TO THE IT/TR ROOM AND TERMINATE ON THE RACK MOUNTED 12 STRAND FIBER OPTIC PATCH PANEL ON LC CONNECTORS.

17.
CONTRACTOR SHALL INSTALL (4) FOUR CATEGORY 6 CABLES TO THE TELEPHONE CROSS CONNECT ROOM AND TERMINATE ON EXISTING 110 BLOCK AND CROSS CONNECT TO VA TELEPHONE BACKBONE SYSTEM AND PHONE SWITCH. IN THE TR TERMINATE CAT 6 CABLES ON CAT 6 PATCH PANEL AND LABEL TO MATCH 110 BLOCK.

18.
EXISTING 110 BLOCK. CONNECT RING DOWN PHONE TO VA TELEPHONE BACKBONE 110 BLOCK TO VA TELEPHONE SYSTEM.

19.
REMOVE EXISTING WIRE WAY. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE.

20.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY HARDWARE, SOFTWARE AND PROGRAMMING TO CONNECT THE FUEL MONITORING SYSTEM TO THE VA BAS SYSTEM. THE CONTRACTOR SHALL CONNECT THE NEW FUEL MONITORING ALARM SYSTEM TO THE EXISTING VA BAS SYSTEM USING THE EXISTING VA NETWORK. THE CONTRACTOR SHALL COORDINATE WITH THE VA IT STAFF FOR IP ADDRESS AND CROSS CONNECTIONS FROM BUILDING 20 TO THE BAS SYSTEM. THE CONTRACTOR SHALL ALSO EMPLOY THE EXISTING VA BAS SUPPORT COMPANY TO PROGRAM THE EXISTING BAS SYSTEM TO ACCEPT ALARMS AND NOTIFY THE BAS SYSTEM WHEN THE FUEL MONITORING SYSTEM IS IN ALARM.

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1	ISSUED FOR BID	1.31.14
Revisions		Date

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Approved:

Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title
ELECTRICAL AND TELECOMMUNICATIONS
OVERALL PLAN

Approved: Chief of Engineering Date

Approved: Director Date

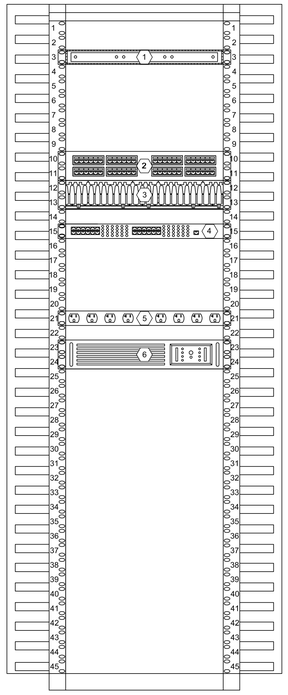
Project Title
E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR.
VA HOSPITAL

Building Number & Floor: BUILDING 20 -SITE PLAN
Checked: MB/RR
Drawn: MB/RR

Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: E1.51

DEPARTMENT OF VETERANS AFFAIRS

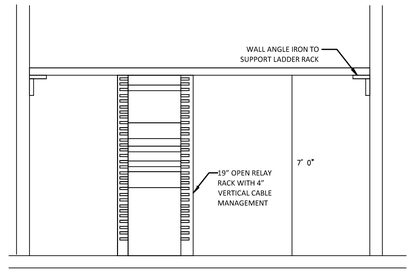


KEYED NOTES

1. FIBER PANEL.
2. 48 PORT PATCH PANEL.
3. CABLE MANAGEMENT SYSTEM.
4. SWITCH.
5. POWER STRIP.
6. POWER SUPPLY / UPS.
7. NO PRODUCT SHALL BE MOUNTED BELOW 3 FEET AFF.

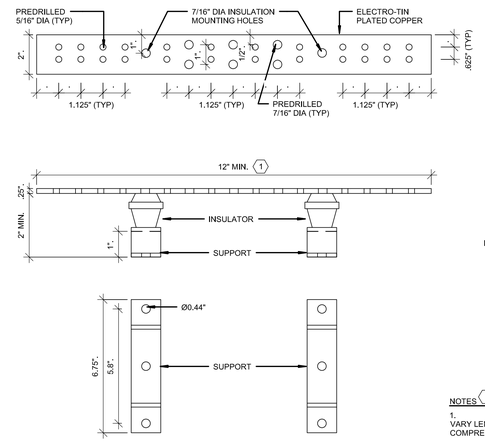
6 TELECOMMUNICATIONS ROOM RACK ELEVATION (7)

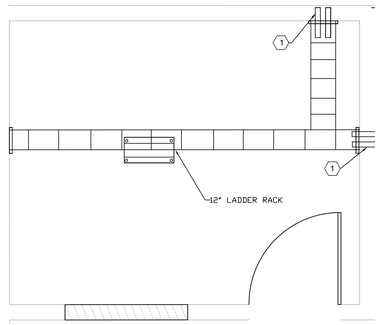
SCALE: NTS



3 TELECOMMUNICATIONS ROOM ELEVATION

SCALE: NTS



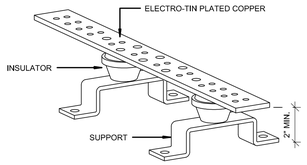


KEYED NOTES

1. TWO (2) E2 PATH 3 INCH AT 7'-6"

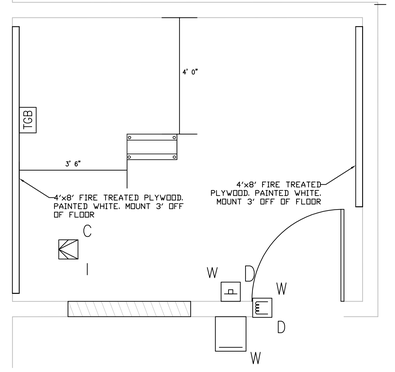
2 TELECOMMUNICATIONS ROOM LADDER RACK

SCALE: 1/2"-1'



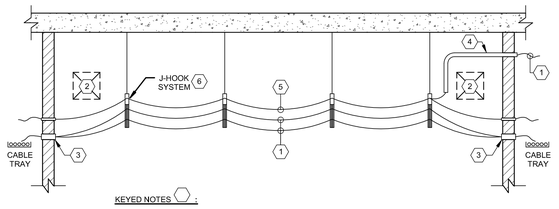
NOTES:

1. VARY LENGTH TO MEET APPLICATION REQUIREMENTS OF LISTED COMPRESSIONS TWO-HOLE LUGS.



1 TELECOMMUNICATIONS ROOM ENLARGED PLAN

SCALE: 1/2"-1'



KEYED NOTES:

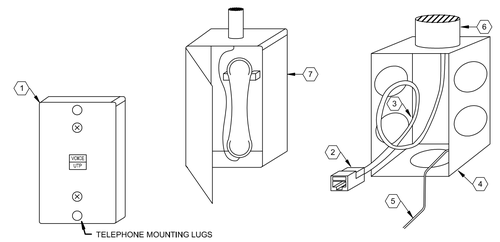
1. DATA COMMUNICATIONS CABLE WITH 3" TO 5" SAG BUNDLED SEPARATE FROM OTHER SYSTEM.
2. POTENTIAL OBSTRUCTIONS.
3. CONDUIT SLEEVE OR FIRE RATED ASSEMBLY. CONTRACTOR SHALL ENSURE THERE ARE NO OBSTRUCTIONS FOR COMMUNICATIONS CABLING.
4. COMMUNICATIONS CABLING SHALL BE REROUTED THROUGH CONDUIT IN CASE OF OBSTRUCTION.
5. SECURITY CABLING SUPPORTED SEPARATE FROM COMMUNICATIONS CABLING.
6. J-HOOKS SHALL BE NO MORE THAN 5 FEET APART.

5 TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)

SCALE: NTS

4 CABLE SUPPORT AND RACEWAY

SCALE: NTS



NOTES (X):

1. SINGLE GANG STAINLESS STEEL COVERPLATE WITH TELEPHONE WALL-MOUNTING LUGS. VERIFY COMPATIBILITY WITH TELEPHONE MANUFACTURER PRIOR TO PURCHASE.
2. MODULAR JACK, 110 TO RJ45, UNIVERSAL WIRING PATTERN NON KEYED, EIGHT POSITION (4 PAIR).
3. TWISTED PAIR TYPE 4 PAIR, HORIZONTAL CABLE FROM LOCAL TELECOMMUNICATIONS ROOM, WITH SERVICE LOOP.
4. SINGLE GANG COMMUNICATIONS OUTLET BOX WITH SINGLE GANG MOUNTING BRACKET.
5. NYLON PULL CORD TO TELECOMMUNICATIONS ROOM.
6. CONDUIT STUB INTO ACCESSIBLE CEILING SPACE.
7. PROVIDE PHONE IN VIKING VE-9x12R-1 FRONT-OPENING WEATHERPROOF CABINET
8. COORDINATE WITH SPECIFIC BACKBOX DEVICE SYMBOLS AS SHOWN ON DRAWINGS TO DETERMINE ROUGH-IN REQUIREMENTS AND LOCATIONS.

7 RING DOWN TELEPHONE

SCALE: NTS

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Revisions		Date

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Approved:

Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: ELECTRICAL AND TELECOMMUNICATION OVERALL PLAN

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Date: 01/31/14

Project No.: VA 701-13-R-0103

Approved: Chief of Engineering Date

Approved: Director Date

Building Number & Floor: BUILDING 20 –SITE PLAN

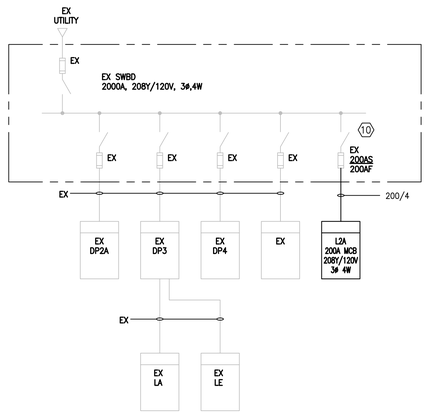
Checked: MB/RR

Drawn: MB/RR

Location: 2100 S 5th Ave #111L Hines, IL 60141

DRAWING NO.: E4.01

DEPARTMENT OF VETERANS AFFAIRS



1 ELECTRICAL ONE-LINE DIAGRAM

FEEDER DESIGNATIONS - COPPER CONDUCTORS

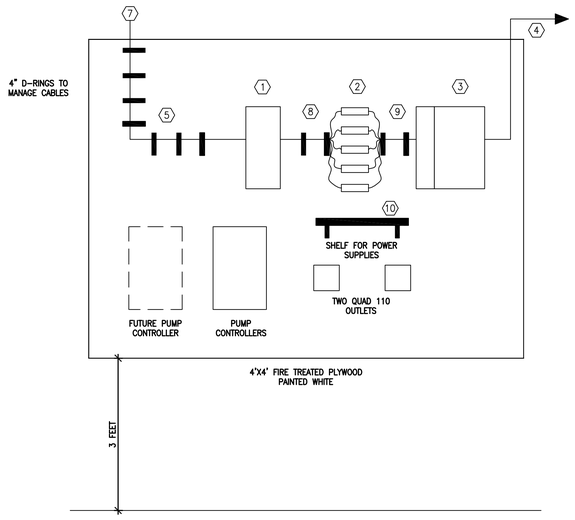
FEEDER ID	AMPS	PHASE WIRES (AWG)	NEUTRAL WIRES (AWG)	GND (AWG)	MIN. CONDUIT SIZE		
200/4	200	(3)#3/0	(1)#3/0	#6	2		

CONDUIT METRIC CONVERSION:	
INCHES	MM
1/2	16
3/4	21
1	27
1-1/4	32
1-1/2	41
2	53
2-1/2	63
3	78
4	103
5	129
6	155

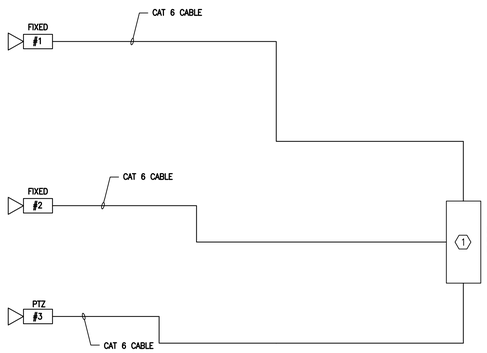
CONDUCTOR METRIC CONVERSION:	
AWG	SQMM
10	5.26
8	8.38
6	13.3
4	21
2	34
1	42
1/0	54
2/0	67
3/0	85
4/0	107
250	127
300	152
350	178
400	203
500	254

KEYED NOTE (1) :

1. 12 PORT 110 STYLE PATCH BLOCK ON 89D BRACKET
2. TRANSITION ENGINEERING MEDIA CONVERTER M/GE-PSW-XX-01, MOUNT ON WALL WITH WMBM
3. WALL MOUNT FIBER OPTIC PANEL. TERMINATE 12 STRANDS OF OM3 MULTI MODE FIBER OPTIC CABLE ON SC CONNECTORS
4. 12 STRAND OM3 MULTI MODE FIBER OPTIC CABLE TO TR ROOM
5. FOUR INCH D RINGS ON PLYWOOD ON TO MANAGE CABLES ON THE WALL. MOUNT EVERY 8 INCHES.
6. SHELF FOR POWER SUPPLIES USED FOR THE MEDIA CONVERTER
7. CATEGORY 6 CABLES FROM CCTV CAMERAS, FUEL FORCE CONTROLLER, ELECTRICAL CHARGING STATION
8. CATEGORY 6 PATCH CABLES
9. FIBER OPTIC PATCH CABLES
10. UTILIZE EXISTING 200A SWITCH IN EXISTING SWITCHBOARD. DETERMINE SUITABILITY PRIOR TO CONSTRUCTION. PROVIDE 200A FUSE AND FEEDER TO PLANELBOARD L2A.



3 TELECOMMUNICATION CROSS CONNECT ROOM ELEVATION



2 TELECOMMUNICATION CCTV CABLE DIAGRAM

Ol&T Cabling Standards and Criteria
Last Revision: 11/16/2011
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The Department of Veterans Affairs, Facilities Management Service, Project Planning, Contracting Officer's Technical Representative (hereinafter referred to as the "COTR"), and the Office of Information and Technology (hereinafter referred to as "Ol&T") intends to upgrade the Information Transport Horizontal Data Cabling Infrastructure of its existing buildings located in the Hines VA Hospital, Hines, IL. The General Contractor, Cabling Contractor, or Certified Installer – as applicable to the contract (hereinafter referred to as the "Contractor") – shall be responsible for all parts, material, labor and all other associated apparatus necessary to completely install, test, certify and turn-over for acceptance to the Ol&T/ COTR, the Information Transport Cabling Infrastructure detailed herein. Include and supply all necessary labor, material, tools and equipment for the proper construction and installation of information transport cabling in accordance with this document, accompanying drawings, and manufacturer's specifications. The Ol&T/ COTR has a requirement to improve the horizontal data cabling infrastructure to enable 1Gbps throughput performance to its work areas. The existing voice cables and termination blocks will remain unchanged.

The Contractor will ensure that all projects will adhere to the following standards and criteria as defined by Hines' Ol&T:

1. Voice/Data overview for Hines VAH

A. The National Electrical Code (NEC) will be adhered to for all installations in addition to the any site specific requirements

B. Materials and workmanship hereinafter specified and furnished shall be fully guaranteed by the Contractor for one year (365 calendar days) from transfer of title against any defects. In addition, defects which may occur as the result of faulty materials or workmanship within one year after installation and acceptance by the Ol&T/ COTR shall be corrected by the Contractor at no additional cost to the Ol&T/ COTR. The Contractor shall promptly, at no cost to the Ol&T/ COTR, correct any nonconforming or defective work within one (1) year after completion of the project of which the work is a part. The period of the Cabling Contractor's warranty(ies) for any items herein are not exclusive remedies, and the Ol&T/ COTR has recourse to any warranties of additional scope given by The Contractor to The Ol&T/ COTR and all other remedies available at law or in equity. The Cabling Contractor's warranties shall commence with acceptance of/or payment for the work in full.

Given that the Contractor will be procuring equipment or materials under the Contract, the Contractor shall obtain for the benefit of the Ol&T/ COTR a minimum of 20-year Structured Connectivity Solutions (SCS) warranty from the manufacturer, including all application assurance, labor & extended product warranties. The Contractor submit any additional warranties offered by the manufacturers, at no additional cost, to the Ol&T/ COTR, should said warranties extend beyond the one-year period specified herein. This warranty shall in no manner cover equipment that has been damaged or rendered unserviceable due to negligence, misuse, acts of vandalism, or tampering by The Ol&T/ COTR or anyone other than employees or agents of The Cabling Contractor. The Cabling Contractor's obligation under its warranty is limited to the cost of repair of the warranted item or replacement thereof, at The Cabling Contractor's option. Insurance covering installed equipment from damage or loss is to be borne by The Contractor until full acceptance of equipment and services.

Ol&T Cabling Standards and Criteria
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C. Contractor will coordinate activities through the COTR – as specified in contract documents – to meet with the Ol&T staff to discuss their plans on conducting the actual work in and all Data or Voice operations prior to the start of the project. The purpose of this meeting is to identify any potential issues or constraints to the scope of work.

D. Cable requirements:
a. Copper
i. All data drops will use two white colored Category 6, four pair, 100 ohm UTP (24 AWG solid conductor), Systimax #.1071 10710O4EWH or equivalent, unless otherwise specified. All materials shall be supplied by the contractor.
ii. All voice drops will use gray colored Category 5e, four pair, 100 ohm UTP (24 AWG solid conductor), unless otherwise specified. All materials shall be supplied by the contractor.
b. Fiber
i. When fiber optics is required the minimum pull shall be 12 strands of 50 micron multimode terminated at both ends with fiber connectors to be determined by Ol&T representative. All materials shall be provided by the contractor, every installation shall be tested and identified with documentation provided to the VA representative

E. Data only drops shall be in dual jack configurations as described below:

a. Data legacy dual jack configuration, no phone:
i. Face plate shall be an ivory colored, dual faceplate
ii. Left side jack shall be 1 black colored RJ45 Cat-6 grade Systimax (or equivalent) data jack on left side position.
iii. Right side jack shall be 1 ivory colored RJ45 Cat-6 grade Systimax (or equivalent) data jack on right side position.

SEE SPECIFICATION BULLETIN A FOR DIAGRAM

b. Data horizontal dual jack configuration, no phone:
1 ea CAT 6 cable terminated to the left black colored RJ45 (CAT6 grade) jack on left
1 ea CAT 6 cable terminated to the right ivory colored RJ45 (CAT6 grade) jack on left

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i. Horizonal installation will rotate faceplate clockwise and data positions clockwise.
ii. Top jack shall be 1 black colored RJ45 Cat-6 grade Systimax (or equivalent) black data jack on top position.
iii. Bottom jack shall be 1 ivory colored RJ45 Cat-6 grade Systimax (or equivalent) ivory data jack on bottom position.

F. Voice Data Drops shall be in quad jack configurations as described below:

a. Quad jack configuration:
i. Voice/data face plate shall be ivory quad faceplate with 2 eight position RJ45 Systimax data jacks or equivalent; on top #.1 Black jack MGS-400003 and #2 Ivory jack MGS-400-246, one data cable for each jack.

ii. Bottom two jacks #3, and #4 shall be white voice six position RJ11 Systimax M1AH-262 jack or equivalent, one wire split with one pair to each jack and 2 pair spare (1 jack has 2 pairs terminated (Blue and Orange) and the second jack also has 2 pairs terminated (green and brown).

iii. For horizontal configuration faceplate will be rotated clockwise with jack orientation also rotated clockwise remaining as #1=black, #2 =ivory, #3 #4 =phone

SEE SPECIFICATION BULLETIN A FOR DIAGRAM

2x CAT 6 cable (one to each keystone jack Black Jack on left, Ivory on the right
1x CAT 5e cable split with 2pair to each jack Left Jack terminated with Blue and Orange Right Jack terminated with Green and Brown

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Last Revision: 11/16/2011
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G. All cable runs shall follow the cable trays that are above the suspended ceilings and terminated at the closet specified by design drawings, COTR, and/or Ol&T.

H. Cables shall not be attached to removable ceiling grid supports or laid directly on the ceiling grid. Cables shall not be attached to or supported by fire sprinkler heads or delivery systems or any environmental sensor in the ceiling air space.

I. In areas where the cable does not traverse conduit, cable trays or ducts, the contractor shall bundle the cables in bundles of 48 (1 bundle per 48-port patch panel). Cable bundles shall then be supported by J-hooks attached to existing building structure at a maximum of five (5) foot intervals.

J. All work shall be installed with Cat-6 equipment and cables. In the case in which existing Cat-5 patch panels are available in the voice/data closets, and there is no further room on the racks to accommodate a new Cat-6 patch panel, then the Contractor will seek further guidance from Ol&T and COTR on how to proceed.

K. If a voice/data closet contains new and existing patch panels with current manufacturer's product warranties, then the contractor must be certified to perform additional work, installation, and use only approved equipment (i.e. cables, jacks, etc.) such that any additional work on that patch panel will not null and void the current manufacturer's product warranty.

L. The Contractor will be responsible for ensuring that the smoke and fire-rated structures (walls, ceiling, and floors) retain their existing smoke or fire-rating in accordance with VA Specification 078400 FIRESTOPPING. Contractors should be aware of any submittals required prior to work commencement. Refer to document located at http://www.cfm.va.gov/til/spec.asp

M. All previously abandoned Voice and/or Data cable in construction area will be removed completely from end to end. If the cable that is to be removed is installed in such a way that it cannot be removed without damaging other cables or equipment, the Contractor shall notify the COTR and Ol&T to allow for further direction If the cable that is to be removed is installed in a way that it cannot be removed without damaging other cables or equipment, the Contractor shall notify the COTR and Ol&T to allow for further direction.

N. The Contractor is responsible for grounding and bonding all the infrastructure provided in this project. Specifically:

a. Use #6 grounding conductors and two-hole irreversible compression connectors to bond racks to the room's telecommunications grounding bus-bar (TGB).
b. The contractor shall provide and install the proper grounding kits for the 66 Block and Patch Panels as required by manufacturer.
c. The contractor shall ground and bond the telecommunications rack.

O. The Contractor is responsible to completely clean and dust all areas that work was performed, whether installing or removing cabling or equipment.

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P. The Contractor is responsible for labeling the following:
a. Terminated Cables – at both ends of each cable (the label shall be installed at 3 inches from the termination).
b. Termination equipment (66 block and/or patch panels)
c. Faceplates.
d. Panels to be sequentially numbered with electronic labels of Ol&T number scheme #.1 #.2 with no omissions or duplications.
e. IRM will provide the appropriate location numbers to the COTR, and contractors will only use those numbers to label the jack, cable, and panel

Q. All data/voice locations on the design plans will use our standards symbology as follows:

i. For 1wire voice only –

ii. For 2 wire Data Only–

iii. For 1 Voice wire and 2 Data wires at a single location–

R. The Contractor shall certify the data cables as a TIA Cat6 Permanent Link and test the cables using Fluke DTX1800 or equivalent tester. Test results shall be furnished to Ol&T upon completion of testing via electronic in .pdf compatible format.
S. Certified PASS test result and warranty should be provided to IRM at least three weeks before activation.
T. If the connected cable in the faceplate does not pass certification, the cable from the faceplate shall be re-terminated and re-certified. In the case with the Voice runs the cables must PASS continuity, opens and wire-map certification. If any line should not PASS, the contractor shall install a new Cat6 cable up to the limit established for the project.

U. Ol&T requires a minimum of one (1) week to review test results, verify locations, and problem areas in order to confirm the resolutions measure necessary for the Contractor to resolve. Furthermore, the test results shall be supplied to Ol&T at least 3 weeks before cable plant system is scheduled to be put into operation. Contractor must meet Ol&T's entire Cabling Standards and Criteria, as outlined in this document, before COTR signs off on the project.

2. Additional Specifications for Basic Data Cable Installations

A. Data closets shall be designed and/or constructed so that ease of use, maintenance, and sprinkler covering (where applicable) is foremost. The data racks shall be standard 'free' standing 2 post data racks or 'wall mounted cabinet' types (to be approved in submittal form – refer to Section 4). The fiber optic panel shall be the topmost panel on the rack and subsequent panels will be below the fiber panel and shall alternate between Patch Panels and Cable Management Panels (3-½" patch panels to be separated by 3-½" cable management panels), while leaving available room for network equipment . A drip loop of all wires will be provided from closet sleeve to closet floor before terminating in rack panels. Additionally, vertical cable management systems shall be provided for both sides of the rack – front and rear cable management – from the floor to top of rack.

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Panels shall be sequentially numbered with electronically printed labels per Ol&T's number scheme (#.1 #.2), with no omissions or duplications.

B. All information system closets – including telephone only, data only, or combined telephone and data – shall be designed and/or constructed to provide, at the minimum, unobstructed access to:

a. One (1) ivory colored duplex or quad 110vac, 15 or 20-amp electrical outlet with an ivory colored cover plate, on a dedicated circuit with isolated ground, for use in the normal power circuitry.

b. One (1) red colored duplex or quad 110vac, 15 or 20-amp electrical outlet with an red colored cover plate, on a dedicated circuit with isolated ground for use on the hospital's critical power circuitry.

The location of the outlets will be determined by the COTR and Ol&T.

C. All cable will be fished through the wall and above the suspended ceiling (if applicable). If construction is to be performed where there is no suspended ceiling or access above and through the suspended ceiling or walls is severely limited, the Contractor may use an approved "surface mounted raceway" (to be approved in submittal, refer to Section 1) and shall have accompanying surface mounted jacks.

D. Terminate the data closet side using Systimax 48 Port CAT6 Patch Panel1100GS3-48 or equivalent, IAW the 20 year product manufacturer's warranty.

E. The Contractor shall be required to install a new Cat-6 patch panel in any cases where new Cat-6 wires are being pulled into an existing closet that currently has only Cat-5 patch panels. At no time will the Contractor terminate Cat-6 cables on to a Cat-5 patch panel. If there is a density issue on the patch panel which prevents the additional Cat-6 patch panel, the cable contractor will work with the COTR and Ol&T representative to develop solutions.

F. In the case of renovations where Cat-6 cabling exists, the cat-6 data cable can be saved and re-used with original numbering system where feasible and approved by the COTR and Ol&T representative. In this instance, if any of the data lines are not being re-used, the Contractor shall remove all abandoned cable from the station side to data closet.

G. Upon completion of job, data closets will be cleaned of all dust and debris from rack, rack panels, cable managers, walls, floor and ceilings.

3. Additional Specifications for Basic Voice Cable Installations

A. Phone closet should be terminated using Siemon Co. S66M1-50 66 blocks wall mounted using 89B brackets or the equivalent. Each station will be tested for continuity and labeled in accordance with Ol&T's numbering system with documentation provided to the VA representative.

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B. One cable will be run from the station side to Ol&T designated Phone closet that is identified with an electronically printed label.

C. All cable will be fished though the walls if possible. Otherwise, Panduit surface raceway systems will be used along with surface mounted jacks. Terminate the station side with Systimax M1AH-262 white voice jacks or equivalent. Terminate the phone closet side using Siemon Co. S66M1-50 66 blocks wall mounted using 89B brackets. Each station will be tested and labeled in accordance with VA numbering system with documentation provided to the VA representative.

D. If area is being remodeled, existing data and voice drops will be saved and re-used with original numbering system where economical. If any data or voice lines are not being reused, contractor will remove all cable from station to phone closet. Phone locations to be identified by numbering system provided by Hines Ol&T, who will also direct installation requirements as necessary.

4. Submittal Requirements:

A. All work shall be performed by a Manufacturer's Certified Business Partner (MCBP); furthermore, the Contractor shall follow the current design and installation guidelines in this specification and those of the VA Master Specifications (http://www.cfm.va.gov/til/spec.asp). Installers must be able to furnish proof that they are currently certified, by the product manufacture, to install the product in accordance with the requirements to meet the 20 manufacturer's product warranty.
The prime/general contractor (GC) shall be responsible furnish a photocopy of the installers' certification to the VA Contracting Officer's Technical Representative (COTR) before any installation can take place.

B. In addition to the above MCBP certification, the Contractor shall obtain and supply proofing documents that the installer(s) are current on their federal, state, and local certifications (where applicable), which shall be in accordance with the current edition of the National Electrical Code, the current edition of the National Electrical Safety Code, the current edition of the Building Industry Consulting Services, International (BICSI) Telecommunications Distribution Methods Manual, the current edition of the BICSI Cabling Installation Manual, the latest issue of the ANSI/TIA/EIA Standards as published by Global Engineering Documents as TIA/EIA Telecommunications Building Wiring Standards, and all local codes and ordinances.

C. All installations of Information Systems equipment (data, telephone, racks, arrays, panels, etc) shall be tested by a certified professional, as described by the Product Manufacturer supplying the warranty. The test results and warranty information will be submitted to the COTR and Ol&T representative before turn-over and final billing will be processed.

D. Furthermore, before work can begin, the Contractor shall provide the following submittals to the COTR:
Ol&T Cabling Standards and Criteria
Last Revision: 11/16/2011
8

a. Cut-Sheets of Fire Stopping material and components shall be supplied when penetrations or other equipment passing between floors, walls, or applicable subsystems being part of the implementation.

b. Cut-Sheets shall be provided the COTR for all proposed items used to implement a plan, to include: panels, cabinets, switches, racks, cabling, hangars, etc. to ensure that they meet or exceed this specification or the specification set forth in design drawings provided by an A/E firm.

c. CAD and/or Shop Drawings, as specified by the Scope of Work or Design Drawings, shall be submitted to the COTR and Ol&T representative prior to installation of a system or subsystem, upon any recommended or directed deviation, and upon completion of installations for use as As-Built documentation.

5. Attachments:
These are sample Identification badges and warranty from the product manufacture. Hines requires that all technicians provide proof that they are certified through the product manufacture to install and service the product they are installing. Furthermore upon completion of the project, the contractor will provide a warranty certificate that the work is covered under a 20 year warranty from the product manufacturer.

Attachment #.1– Sample Identification badge from product manufacturer
Attachment #.2– Sample 20 year product warranty certificate
Attachment #3– Sample 20 year product warranty certificate

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1	ISSUED FOR BID	1.31.14
Revisions		Date

CANNONDESIGN
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Baltimore • Boston • Buffalo • Chicago • Jacksonville • Los Angeles • New York
St. Louis • Vancouver • Washington DC

Approved:
Chief, FMS:
Chief of Projects:
Chief of Safety:
Chief of Staff:
ED Director:
Infection Control:

Drawing Title: ELECTRICAL AND TELECOMMUNICATIONS — ONE-LINE DIAGRAMS
Approved: Chief of Engineering Date
Approved: Director Date

Project Title: E-85 FUEL STATION BUILDING 20 — EDWARD HINES, JR. VA HOSPITAL
Building Number & Floor: BUILDING 20 –SITE PLAN
Checked: MB/RR
Drawn: MB/RR
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: E5.01

DEPARTMENT OF VETERANS AFFAIRS

EQUIPMENT CONNECTION / MOTOR CONTROLLER SCHEDULE

EQUIPMENT DESIGNATION	EQUIPMENT / MOTOR DATA								CONTROLLER DATA														LOCAL DISCONNECT SWITCH						SOURCE PROTECTIVE DEVICE					WIRING									REMARKS
									MOUNTING					OVERCURRENT PROTECTIVE DEVICE									OVERCURRENT PROTECTIVE DEVICE							TYPE					PHASE		NEUTRAL		GROUND		CONDUIT			
	DESCRIPTION	HP	KW	FLA	NORMAL PWR	EMERGENCY POWER	VOLTAGE	PHASE	PACKAGED	SEPARATE	MCC	TYPE	NEMA SIZE	MCP	FUSE	RATING	SINGLE PHASE PROTECTION	NEMA ENCLOSURE	WEIGHT(LBS)	LOCATION	MCP	FUSE	RATING	NEMA ENCLOSURE	WEIGHT(LBS)	LOCATION	MCP*	FUSE	BREAKER	POLE AMPS	PANELBOARD OR MCC	QUANTITY	SIZE	QUANTITY	SIZE	QUANTITY	SIZE	QUANTITY	SIZE	TYPE		
FP-1	FUEL PUMP	5	–	–	X	–	208V	3	X	–	–	–	–	–	–	–	–	3R	–	PCU	–	–	30A	3R	–	NU	–	–	X	30	L2A	3	#8	–	–	1	#10	1	1-1/2"	CP	1	
FP-2	FUEL PUMP	1-1/2	–	–	X	–	208V	1	–	X	–	ALC	1	–	–	–	–	3R	–	NU	–	–	–	–	–	–	–	–	X	30	L2A	2	#8	–	–	1	#10	1	1-1/2"	DC	1,2	

CONTROLLER TYPE:
AL ACROSS THE LINE H-O-A
ALC ACROSS THE LINE COMBINATION DISCONNECT H-O-A
ALO ACROSS THE LINE COMBINATION DISCONNECT O-A
RV REDUCED VOLTAGE
RVC REDUCED VOLTAGE COMBINATION DISCONNECT
2S TWO SPEED
VSD VARIABLE SPEED DRIVE
TS FRACTIONAL HP MANUAL STARTER

*MINIMUM MOTOR CIRCUIT PROTECTOR (MCP) FRAME SIZE SHALL BE BASED ON LISTED POLE AMPS

GENERAL NOTES:
A. FINAL CONNECTIONS TO ALL EQUIPMENT SHALL BE MADE BY DIVISION 26. INTERCONNECT ALL ASSOCIATED EQUIPMENT ELECTRICAL DEVICES.

B. VERIFY ALL RECEPTACLE TYPES AND BRANCH WIRING WITH EQUIPMENT SUPPLIER FOR COORDINATION OF EQUIPMENT PLUGS AND WIRING PRIOR TO INSTALLATION.

CONNECTION TYPE:
CP CONTROL PANEL – MAKE DIRECT CONNECTION
DR STANDARD NEMA 5-20R DUPLEX RECEPTACLE
JB JUNCTION BOX
DC DIRECT CONNECTION TO EQUIPMENT
RC RECEPTACLE TO MATCH EQUIPMENT PLUG

LOCATION:
NU NEAR UNIT
OU ON UNIT
PCU PACKAGE CONTROL UNIT
MCC MOTOR CONTROL CENTER

REMARKS:
1. PROVIDE EXPLOSON PROOF STARTER OR DISCONNECT.
2. INTERFACE FUEL DISPENSER PUMP RELAY WITH AUXILLARY START CONTACTS OF CONTROLLER.

LUMINAIRE SCHEDULE

TAG	DESCRIPTION	INSTALLATION METHOD	DEPTH	LAMP SPEC	LAMP QTY	BALLAST SPEC	BALLAST VOLT	INPUT WATTS	SHIELDING/OPTICS	FEATURES/OPTIONS	REFERENCED PRODUCTS	NOTES
LX1	EXTERIOR, POLE MOUNTED, LED LUMINAIRE	POLE	3-15/16"	LED 3000K 80 CRI	1	LED DRIVER	120	103	INJECTION MOLDED ACRYLIC. 3000K CCT, 80 CRI, 5MQ DISTRIBUTION	SQUARE 20'-0" HIGH POLE, DARK BRONZE FINISH, FIXTURE MOUNT OCCUPANCY SENSOR, FIXTURE MOUNT PHOTOCELL.	MCGRAW EDISON – GALEON SERIES LITHONIA – DSX1 SERIES	1,2

GENERAL NOTES:
A REFERENCED PRODUCTS ARE INCLUDED HEREIN, OF MANUFACTURERS & PRODUCTS, THAT GENERALLY CONFORM TO THE LUMINAIRE DESIGN INTENTS ESTABLISHED HEREIN, & IN THE PROJECT MANUAL. EQUIVALENT PRODUCTS BY OTHER MANUFACTURERS MAY BE CONSIDERED, PRIOR TO BID.
B DETERMINE SPECIFIC LUMINAIRE PART NUMBERS BASED ON THE REFERENCED PRODUCT SERIES, WRITTEN DESCRIPTIONS & PROJECT MANUAL SPECIFICATIONS.
C INCLUSION HEREIN OF MANUFACTURER'S SERIES &/OR MODEL NUMBERS DOES NOT IMPLY UNCONDITIONAL PRODUCT APPROVAL – MANUFACTURER'S STANDARD PRODUCTS MAY REQUIRE CUSTOM MODIFICATIONS TO MEET THE REQUIREMENTS SPECIFIED HEREIN & IN THE PROJECT MANUAL.
D LISTED SIZES, LAMPING, & TYPES OF LUMINAIRES MAY NOT BE AVAILABLE FROM ANY GIVEN MANUFACTURER OR SERIES.
E ALERT ARCHITECT TO DISCREPANCIES PRIOR TO BID.

ABBREVIATIONS:

CONC	CONCRETE	LG	LAY-IN GRID	PL	PLASTER	SPEC	SPECULAR	WH	WHITE		
DW	DRYWALL	LO-IRI	LOW IRRIDESCENT	PPC	POLYESTER POWER COAT	S'SPEC	SEMI-SPECULAR				
D/I	DIRECT/INDIRECT	NT	NARROW TEE GRID	PRISM	PRISMATIC	SS	STAINLESS STEEL				
ELBD	EMERG. LTG. BYPASS DEVICE	PAF	PAINT AFTER FABRICATION	REFL'T	REFLECTOR/REFLECTANCE	TBS	TO BE SELECTED BY ARCH				
EXP	EXPOSED	PARA	PARABOLIC	SP	SPLINE CEILING SYSTEM	UNIV	UNIVERSAL 120-277VAC				

NOTES:
1 PROVIDE MOUNTING PROVISIONS FOR SECURITY CAMERA, EXPLOSION PROOF RECEPTACLE IN BASE.
2 WIRE WITH (2)#8, #10G, IN 1-1/2"C.

WIRING TERMINATION SCHEDULE

ID	DESCRIPTION	VOLTAGE	PHASE	SOURCE PROTECTIVE DEVICE TYPE FUSE	SOURCE PROTECTIVE DEVICE TYPE BREAKER	POLE AMPS	POLES	PHASE QUANTITY	PHASE SIZE	NEUTRAL QUANTITY	NEUTRAL SIZE	GROUND QUANTITY	GROUND SIZE	CONDUIT QUANTITY	CONDUIT SIZE	CONNECTION TYPE	SPECIAL MOUNTING HEIGHT	REMARKS
CR	CARD READER	120	1	–	X	20A	1	1	8	1	8	1	10	1	1-1/2"	JB	CWM	1
EPRF	EXPLOSION PROOF OUTLET	120	1	–	X	20A	1	1	8	1	8	1	10	1	1-1/2"	RC	CV	3
FD	FUEL DISPENSER	120	1	–	X	20A	1	1	8	1	8	1	10	1	1-1/2"	JB	CWM	1
FM	FUEL MONITORING SYSTEM	120	1	–	X	20A	1	1	12	1	12	1	12	1	3/4"	JB	CWM	
EVC	ELECTRIC VEHICLE CHARGING STATION	208	1	–	X	40A	1	2	8	–	–	1	10	1	1-1/2"	JB	CWM	2,3
		208	1	–	X	40A	1	2	8	–	–	1	10	1	1-1/2"	JB	CWM	2,3
VC	VIDEO CAMERA	120	1	–	X	20A	1	1	12	1	12	1	12	1	3/4"	JB	CWM	

ABBREVIATIONS:
MC OUTLET MOUNTED IN MILLWORK. FEED FROM FLOOR OR WALL AS REQUIRED.
GFI GFI OUTLET
IG ISOLATED GROUND OUTLET
AC ABOVE COUNTER OUTLET. COORDINATE HEIGHT WITH ARCHITECTURAL ELEVATION.
N NORMAL OUTLET MOUNTING HEIGHT. REFER TO SPECIFICATION 262716.
WM OUTLET MOUNTED IN MULTIOUTLET ASSEMBLY
V VARIES. (VERIFY)
CWM COORDINATE WITH EQUIPMENT MANUFACTURER.

CONNECTION TYPE:
CP CONTROL PANEL – MAKE DIRECT CONNECTION
D LOCAL DISCONNECT SWITCH MOUNTED NEAR UNIT. WIRE FROM DISCONNECT TO EQUIPMENT.
DR STANDARD NEMA 5-20R DUPLEX RECEPTACLE
JB JUNCTION BOX
DC DIRECT CONNECTION TO EQUIPMENT OR PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
RC RECEPTACLE TO MATCH EQUIPMENT

EDITOR'S NOTE
1. PROVIDE HAZARDOUS CLASS 1, DIVISION 1, GROUP D INSTALLATION.
2. PROVIDE DUAL PEDISTAL MOUNT ELECTRIC VEHICLE CHARGING STATION WITH (2) SAE COMPLIANT LOCKING HANDLES.
3. PROVIDE (2) 40A/2P CIRCUITS TO ELECTRIC VEHICLE CHARGING STATION. PROVIDE (2) 20A/1P CIRCUITS TO WEATHERPROOF RECEPTACLES EMMEDIATLY ADJACENT TO ELECTRIC VEHICLE CHARGING STATION. ROUTE ALL IN A SINGLE CONDUIT.

PANEL: L2A — LOCATION: — FED FROM: EX SWBD
DC DEVICE TYPE: Breaker — DEVICE FAMILY: Bolt On
ENCLOSURE: NEMA 1 — MOUNTING: Surface — VOLTAGE: 208/120
MAINS(A): 200A MCB — WIRING: 3-Phase 4-Wire
CONTINUOUS(A): 200 — BUS SC RATING(A) 10000 — FAULT CURRENT(A): 5514

OC AMPS	P	NOTES	DESCRIPTION	DEMAND CODE	VA	CKT	PHASE LOADS VA A	B	C	CKT	VA	DEMAND CODE	DESCRIPTION	NOTES	OC AMPS	P
40	2		EVC	GEN	6656	1	6656			2	6656	GEN	EVC		40	2
"	"		"		–	3		6656		4	–		"		"	"
20	1		REC	GEN	360	5			2882	6	360	GEN	REC		20	1
20	1	EPRF	(2) EPRF REC	REC	360	7	2365			8	6016	GEN	FP-1		30	3
20	1		(2) LX1 FIXTURE	LTS	1000	9		3005		10	–		"		"	"
30	1		FP-2, (2) FD	GEN	1921	11			3927	12	–		"		"	"
20	1		VRS	GEN	1000	13	1000			14	1000	GEN	VC		20	1
20	1		VRS	GEN	1000	15		1000		16	1000	GEN	CR		20	1
0	1		SPACE	SPACE	0	17			0	18	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	19	0			20	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	21		0		22	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	23			0	24	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	25	0			26	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	27		0		28	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	29			0	30	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	31	0			32	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	33		0		34	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	35			0	36	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	37	0			38	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	39		0		40	0	SPACE	SPACE		0	1
0	1		SPACE	SPACE	0	41			0	42	0	SPACE	SPACE		0	1

	KVA	3P AVE AMPS		PHASE TOTALS	VA	AMPS		BUS TOTALS	KVA
ALL CONNECTED									
TOTAL CONNECTED	27.49	76.3	*	A-N	10021.5	83.5		CONNECTED	27.49
TOTAL DEMAND	27.49	76.3	*	B-N	10661.5	88.8		DEMAND	27.49
TOTAL DESIGN	27.74	77.0	*	C-N	6809.0	56.7		DESIGN	27.74

DATE: Nov 08, 2013
TIME: 11:25:14

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Revisions		Date

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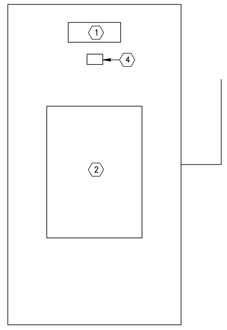
Approved:
Chief, FMS:
Chief of Projects:
Chief of Safety:
Chief of Staff:
ED Director:
Infection Control:

Drawing Title: ELECTRICAL AND TELECOMMUNICATIONS SCHEDULES
Approved: Chief of Engineering — Date
Approved: Director — Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL
Building Number & Floor: BUILDING 20 –SITE PLAN
Checked: MB/RR
Drawn: MB/RR
Location: 2100 S 5th Ave #111L Hines, IL 60141

Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: E6.01

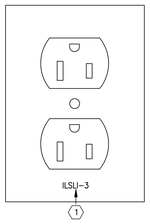
DEPARTMENT OF VETERANS AFFAIRS



MOTOR DISCONNECT SWITCH (MAY BE PART OF MOTOR CONTROLLER) (FRONT VIEW)

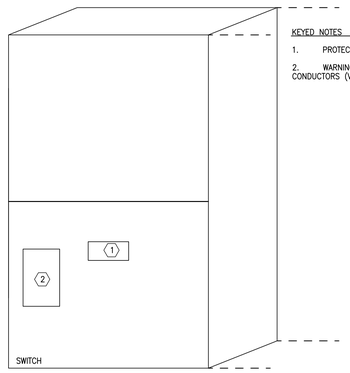
KEYED NOTES ⬡ :

1. EQUIPMENT IDENTIFICATION LABEL.
2. WARNING LABEL UNGROUNDED CONDUCTORS (VOLTAGE LABEL).
3. MOTOR DISCONNECT SWITCH WARNING. LABEL



KEYED NOTES ⬡ :

1. SELF-ADHESIVE LABEL ON BACK OF WALL PLATE COVER.

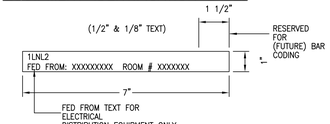


SWITCHBOARD COMPARMENTS (GENERAL) (ISOMETRIC VIEW)

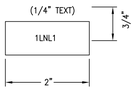
KEYED NOTES ⬡ :

1. PROTECTIVE DEVICE LOAD LABEL.
2. WARNING LABEL UNGROUNDED CONDUCTORS (VOLTAGE LABEL).

EQUIPMENT IDENTIFICATION LABEL

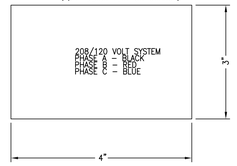


LOAD LABEL SAMPLE



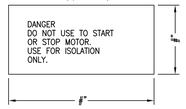
VOLTAGE LABEL SAMPLE

(1/4" BLACK TEXT ON ORANGE)



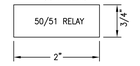
MOTOR DISCONNECT SWITCH WARNING LABEL

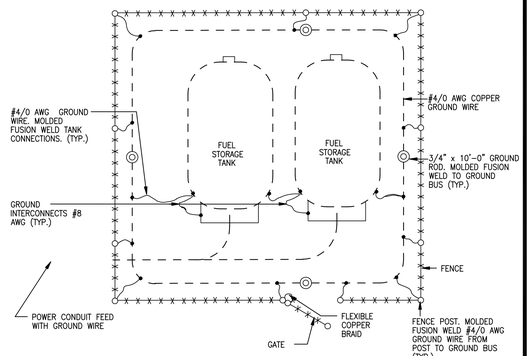
(3/8" TEXT)



IDENTIFICATION LABEL

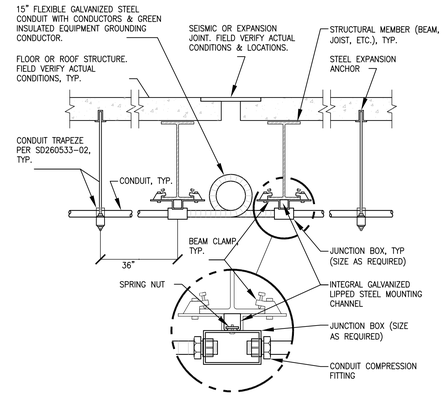
(1/4" TEXT)

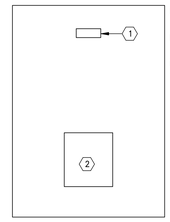




1 ABOVE GROUND FUEL STORAGE TANK GROUNDING

2 ELECTRICAL IDENTIFICATION LABELS



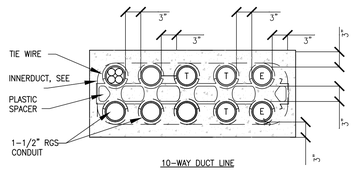


KEYED NOTES ⬡ :

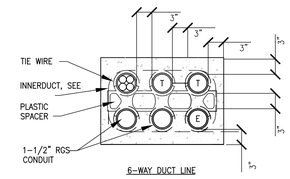
1. EQUIPMENT IDENTIFICATION LABEL.
2. WARNING LABEL UNGROUNDED CONDUCTORS (VOLTAGE LABEL).

SURGE PROTECTION DEVICE (FRONT VIEW)

3 EXISTING SWITCHBOARD COMPARTMENT IDENTIFICATIONS



10-WAY DUCT LINE



6-WAY DUCT LINE

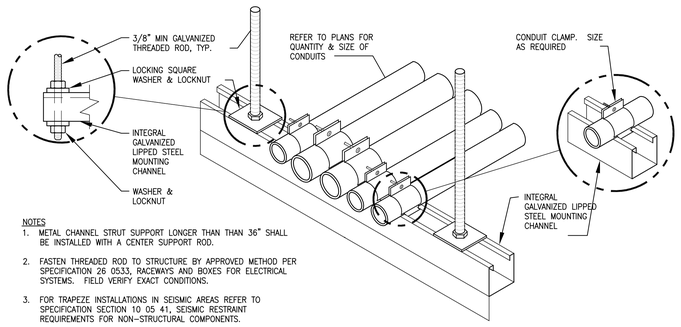
DUCT LINE

DUCT BANK NOTES:

1. CONCRETE SHALL BE 2000 P.S.I. @ 28 DAYS, OR AS SPECIFIED.
2. PROVIDE REINFORCING RODS ON TOP AND BOTTOM OF DUCTS WHEN CROSSING OR PLACED IN ROADWAYS.
3. MINIMUM COVER TO TOP OF ENVELOPE SHALL BE 24" [610mm].
4. PROVIDE MINIMUM 6" [152mm] SPACE BETWEEN POWER AND TELECOMMUNICATION DUCTS. INCREASE SIZE AS REQUIRED.

4 RECEPTACLE CIRCUIT IDENTIFICATIONS

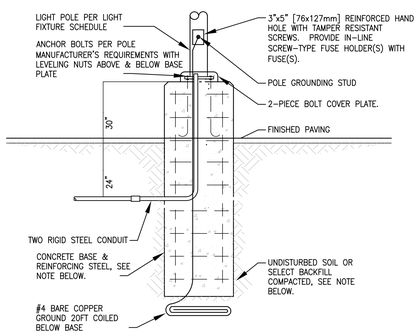
5 MOTOR DISCONNECT IDENTIFICATIONS



NOTES

1. METAL CHANNEL STRUT SUPPORT LONGER THAN THAN 36" SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 26 0533, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.
3. FOR TRAPEZE INSTALLATIONS IN SEISMIC AREAS REFER TO SPECIFICATION SECTION 10 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

6 SURGE PROTECTION DEVICE IDENTIFICATIONS



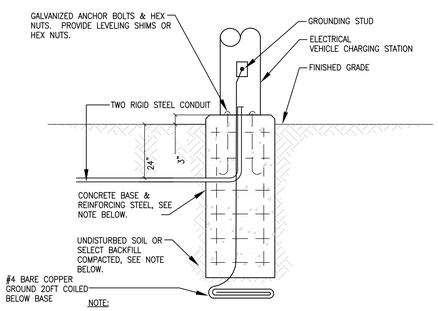
NOTE:

BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. PEDISTAL DESIGN IS SHOWN ON CIVIL DRAWINGS.

7 CONDUIT JOINT CROSSING DETAIL

8 DUCT BANK DETAIL

9 CONDUIT TRAPEZE MOUNTING DETAIL



NOTE:

BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. PEDISTAL DESIGN IS SHOWN ON CIVIL DRAWINGS.

11 ELECTRICAL VEHICLE CHARGING STATION BASE DETAIL

10 POLE BASE DETAIL

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1	ISSUED FOR BID	1.31.14
Revisions		Date

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Approved:

Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: ELECTRICAL AND TELECOMMUNICATIONS DETAILS

Approved: Chief of Engineering Date

Approved: Director Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Building Number & Floor: BUILDING 20 -SITE PLAN
Checked: MB/RR
Drawn: MB/RR

Location: 2100 S 5th Ave #111L Hines, IL 60141

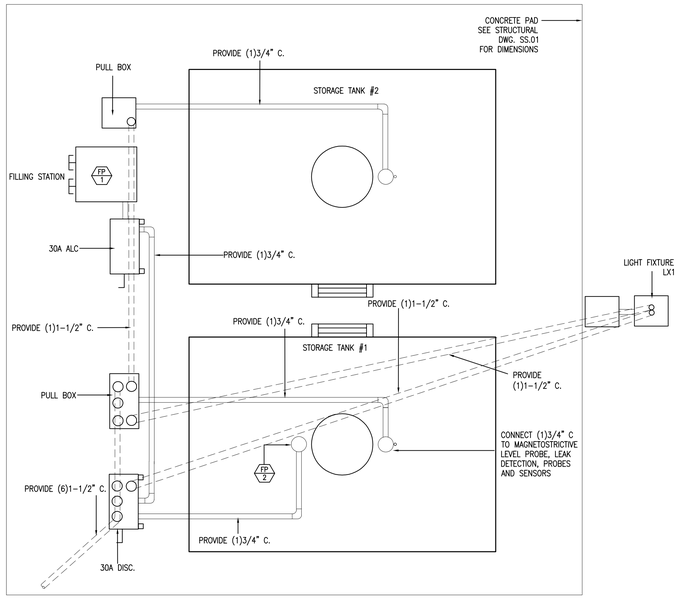
Date: 01/31/14
Project No.: VA 701-13-R-0103
DRAWING NO.: E7.01

DEPARTMENT OF VETERANS AFFAIRS

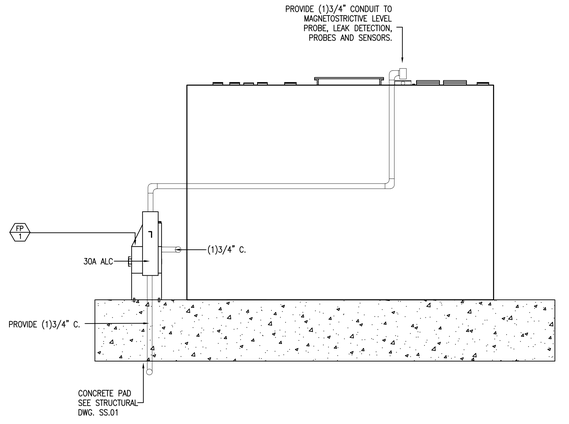
KEYED NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY HARDWARE, SOFTWARE AND PROGRAMMING TO CONNECT THE FUEL MONITORING SYSTEM TO THE VA BAS SYSTEM. THE CONTRACTOR SHALL CONNECT THE NEW FUEL MONITORING ALARM SYSTEM TO THE EXISTING VA BAS SYSTEM USING THE EXISTING VA NETWORK. THE CONTRACTOR SHALL COORDINATE WITH THE VA IT STAFF FOR IP ADDRESS AND CROSS CONNECTIONS FROM BUILDING 20 TO THE BAS SYSTEM. THE CONTRACTOR SHALL ALSO EMPLOY THE EXISTING VA BAS SUPPORT COMPANY TO PROGRAM THE EXISTING BAS SYSTEM TO ACCEPT ALARMS AND NOTIFY THE BAS SYSTEM WHEN THE FUEL MONITORING SYSTEM IS IN ALARM.

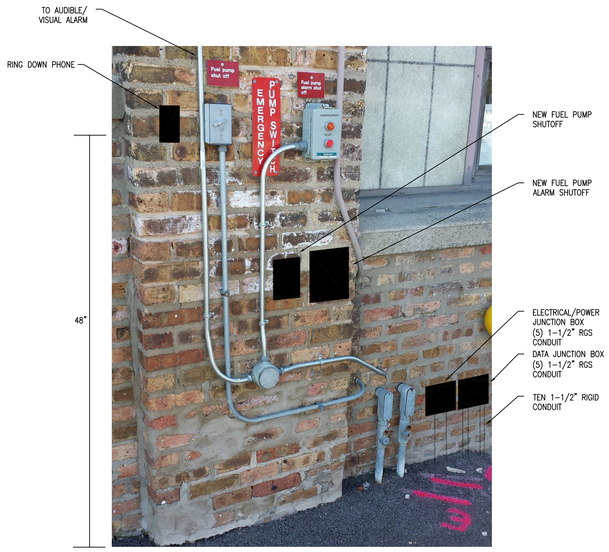
3 CONTROL PANEL ELEVATION



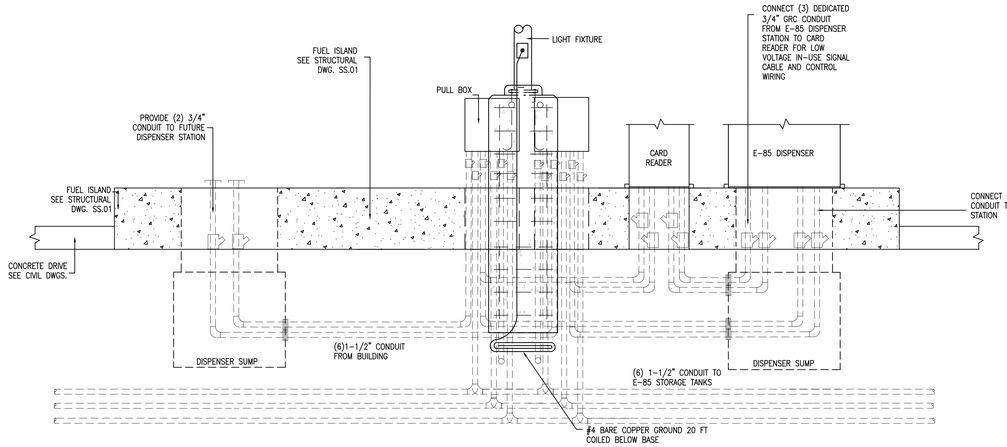
2 TANK ENLARGED PLAN



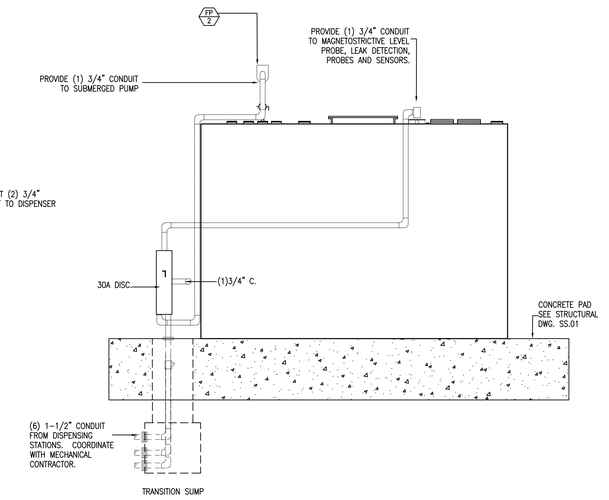
1 STORAGE TANK #2 SENSOR DIAGRAM



6 BUILDING ENTRANCE ELEVATION



5 E-85 DISPENSER ELECTRICAL ELEVATION



4 STORAGE TANK #1 SENSOR DIAGRAM

9		
8		
7		
6		
5		
4		
3		
2		
1	ISSUED FOR BID	1.31.14
Revisions		Date

CANNONDESIGN

225 North Michigan Avenue, Suite 1100, Chicago, Illinois 60601 312.332.9600

Baltimore • Boston • Buffalo • Chicago • Jacksonville • Los Angeles • New York
St. Louis • Vancouver • Washington DC

Approved:

Chief, FMS: _____
Chief of Projects: _____
Chief of Safety: _____
Chief of Staff: _____
ED Director: _____
Infection Control: _____

Drawing Title: ELECTRICAL AND TELECOMMUNICATIONS DETAILS

Approved: Chief of Engineering Date

Approved: Director Date

Project Title: E-85 FUEL STATION BUILDING 20
EDWARD HINES, JR. VA HOSPITAL

Location: 2100 S 5th Ave #111L Hines, IL 60141

Building Number & Floor: BUILDING 20 -SITE PLAN
Checked: MB/RR
Drawn: MB/RR

Date: 01/31/14

Project No.: VA 701-13-R-0103

DRAWING NO. E7.02

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